



Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Volume 3
(Comment Response Document)



AVAILABILITY OF THE
FINAL ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION
OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE
SANTA SUSANA FIELD LABORATORY
(SSFL Area IV EIS)

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Reader's Guide

This Comment Response Document (CRD) portion of the *Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL Area IV EIS)* consists of four sections:

- **Section 1 – Overview of the Public Comment Process**

This section describes the public comment process for the *Draft SSFL Area IV EIS*; the format used in the public hearings on the *Draft SSFL Area IV EIS*; the organization of this CRD and how to use the document; and the changes made by the U.S. Department of Energy (DOE) to the *Final SSFL Area IV EIS* in response to the public comments and recent developments that occurred since publication of the *Draft SSFL Area IV EIS*.

- **Section 2 – Topics of Interest**

This section presents summaries of topics identified from the public comments received on the *Draft SSFL Area IV EIS* and DOE's response to each issue.

- **Section 3 – Public Comments and DOE Responses**

This section presents a side-by-side display of all of the comments received by DOE on the *Draft SSFL Area IV EIS* and DOE's response to each comment. The comments were obtained at two public hearings on the *Draft SSFL Area IV EIS* and via telephone, email, and U.S. mail.

- **Section 4 – References**

This section contains the references cited in this CRD.

To Find a Specific Comment and DOE Response

Refer to the "List of Commenters" immediately following the Table of Contents. This list is organized alphabetically by commenter name and shows the corresponding page number(s) where commenters can find their comment(s).

DOE has made a good faith effort to interpret the spelling of names that were either hand-written on comment forms and letters, or transcribed from oral statements made during public hearings.

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ACRONYMS, ABBREVIATIONS, AND CONVERSION CHARTS

ACRONYMS, ABBREVIATIONS, AND CONVERSION CHARTS

AEA	Atomic Energy Act
AFB	Air Force Base
ALARA	as low as reasonably achievable
AOC	Administrative Order on Consent
ASER	Annual Site Environmental Report
ATSDR	Agency for Toxic Substances and Disease Registry
BMP	best management practice
BTV	background threshold value
CAG	Community Advisory Group
CC14	carbon tetrachloride
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CIF	Community Involvement Fund
CLL	chronic lymphocytic leukemia
CMWD	Calleguas Municipal Water District
CNEL	Community Noise Equivalent Level
CO	Consent Order
COCs	contaminants of concern
CRD	Comment Response Document
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
ECL	Environmental Chemistry Laboratory
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ESALs	equivalent single axle loads
ETEC	Energy Technology Engineering Center
FR	<i>Federal Register</i>
GIS	Geographical Information System
GWIM	Groundwater Interim Measures

HSA	Historical Site Assessment
HI	Hazard Index
HQ	Hazard Quotient
IDLH	Immediately Dangerous to Life or Health
IEI	International Epidemiology Institute
LLW	low-level radioactive waste
LUT	Look-Up Table
MDC	minimum detectable concentrations
MLLW	mixed low-level radioactive waste
MORe	Mandatory Commercial Organics Recycling
MOU	Memorandum of Understanding
MRL	method reporting limit
NAAQS	National Ambient Air Quality Standard
NASA	National Aeronautics and Space Administration
NBZ	Northern Buffer Zone
NCI	National Cancer Institute
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRC	Nuclear Regulatory Commission
NRHP	<i>National Register of Historic Places</i>
OSWER	Office of Solid Waste and Emergency Response
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
ppb	parts per billion
ppm	parts per million
PSD	Prevention of Significant Deterioration
RESRAD	RESidual RADioactivity
RBSL	risk-based screening level
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RMHF	Radioactive Materials Handling Facility
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SHPO	State Historic Preservation Officer
SRAIP	Soils Remedial Action Implementation Plan
SRAM	Standardized Risk Assessment Methodology
SRE	Sodium Reactor Experiment

SSFL	Santa Susana Field Laboratory
SWEIS	Sitewide Environmental Impact Statement
TACs	toxic air contaminants
TCE	trichloroethylene
TPH	total petroleum hydrocarbons
UCL	upper confidence limit
UCL95	95 percent upper confidence limit on the arithmetic mean
UCLA	University of California, Los Angeles
USFWS	U.S. Fish and Wildlife Service
VCAPCD	Ventura County Air Pollution Control District
WAC	waste acceptance criteria

CONVERSIONS

METRIC TO ENGLISH			ENGLISH TO METRIC		
Multiply	by	To get	Multiply	by	To get
Area					
Square meters	10.764	Square feet	Square feet	0.092903	Square meters
Square kilometers	247.1	Acres	Acres	0.0040469	Square kilometers
Square kilometers	0.3861	Square miles	Square miles	2.59	Square kilometers
Hectares	2.471	Acres	Acres	0.40469	Hectares
Concentration					
Kilograms/square meter	0.16667	Tons/acre	Tons/acre	0.5999	Kilograms/square meter
Milligrams/liter	1 ^a	Parts/million	Parts/million	1 ^a	Milligrams/liter
Micrograms/liter	1 ^a	Parts/billion	Parts/billion	1 ^a	Micrograms/liter
Micrograms/cubic meter	1 ^a	Parts/trillion	Parts/trillion	1 ^a	Micrograms/cubic meter
Density					
Grams/cubic centimeter	62.428	Pounds/cubic feet	Pounds/cubic feet	0.016018	Grams/cubic centimeter
Grams/cubic meter	0.0000624	Pounds/cubic feet	Pounds/cubic feet	16,025.6	Grams/cubic meter
Length					
Centimeters	0.3937	Inches	Inches	2.54	Centimeters
Meters	3.2808	Feet	Feet	0.3048	Meters
Kilometers	0.62137	Miles	Miles	1.6093	Kilometers
Temperature					
<i>Absolute</i>					
Degrees Celsius + 17.78	1.8	Degrees Fahrenheit	Degrees Fahrenheit - 32	0.55556	Degrees Celsius
<i>Relative</i>					
Degrees Celsius	1.8	Degrees Fahrenheit	Degrees Fahrenheit	0.55556	Degrees Celsius
Velocity/Rate					
Cubic meters/second	2118.9	Cubic feet/minute	Cubic feet/minute	0.00047195	Cubic meters/second
Grams/second	7.9366	Pounds/hour	Pounds/hour	0.126	Grams/second
Meters/second	2.237	Miles/hour	Miles/hour	0.44704	Meters/second
Volume					
Liters	0.26418	Gallons	Gallons	3.78533	Liters
Liters	0.035316	Cubic feet	Cubic feet	28.316	Liters
Liters	0.001308	Cubic yards	Cubic yards	764.54	Liters
Cubic meters	264.17	Gallons	Gallons	0.0037854	Cubic meters
Cubic meters	35.314	Cubic feet	Cubic feet	0.028317	Cubic meters
Cubic meters	1.3079	Cubic yards	Cubic yards	0.76456	Cubic meters
Cubic meters	0.0008107	Acre-feet	Acre-feet	1233.49	Cubic meters
Weight/Mass					
Grams	0.035274	Ounces	Ounces	28.35	Grams
Kilograms	2.2046	Pounds	Pounds	0.45359	Kilograms
Kilograms	0.0011023	Tons (short)	Tons (short)	907.18	Kilograms
Metric tons	1.1023	Tons (short)	Tons (short)	0.90718	Metric tons
ENGLISH TO ENGLISH					
Acre-feet	325,850.7	Gallons	Gallons	0.00003046	Acre-feet
Acres	43,560	Square feet	Square feet	0.000022957	Acres
Square miles	640	Acres	Acres	0.0015625	Square miles

^a This conversion is only valid for concentrations of contaminants (or other materials) in water.

METRIC PREFIXES

Prefix	Symbol	Multiplication factor
exa-	E	1,000,000,000,000,000,000 = 10 ¹⁸
peta-	P	1,000,000,000,000,000 = 10 ¹⁵
tera-	T	1,000,000,000,000 = 10 ¹²
giga-	G	1,000,000,000 = 10 ⁹
mega-	M	1,000,000 = 10 ⁶
kilo-	k	1,000 = 10 ³
deca-	D	10 = 10 ¹
deci-	d	0.1 = 10 ⁻¹
centi-	c	0.01 = 10 ⁻²
milli-	m	0.001 = 10 ⁻³
micro-	μ	0.000 001 = 10 ⁻⁶
nano-	n	0.000 000 001 = 10 ⁻⁹
pico-	p	0.000 000 000 001 = 10 ⁻¹²

SECTION 1
OVERVIEW OF THE PUBLIC COMMENT PROCESS

1.0 OVERVIEW OF THE PUBLIC COMMENT PROCESS

This section of this Comment Response Document (CRD) describes the public comment process for the *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS)* and the procedures used to respond to those comments. Section 1.1 describes the public comment process and the means of receiving comments on the *Draft SSFL Area IV EIS*. It also identifies the comment period and the locations and dates of the public hearings on the *Draft SSFL Area IV EIS*. Section 1.2 addresses the public hearing format. Section 1.3 describes the organization of this CRD, including how the comments were categorized, addressed, and documented. Section 1.4 summarizes the changes made to the environmental impact statement (EIS) that resulted from the public comment process. Section 1.5 summarizes the next steps the U.S. Department of Energy (DOE) will take after publication of the *Final SSFL Area IV EIS*.

Comment document – A communication in the form of an electronic statement (website entry, document upload, or email), a letter, transcript, or written comment from a public hearing that contains comments from a sovereign nation, government agency, organization, or member of the public regarding the *Draft SSFL Area IV EIS*.

Comment – A statement or question regarding the draft EIS content that conveys approval or disapproval of proposed actions, recommends changes, or seeks additional information.

1.1 Public Comment Process

DOE prepared the *Draft SSFL Area IV EIS* in accordance with the National Environmental Policy Act of 1969 (NEPA) and Council on Environmental Quality and DOE NEPA regulations (Title 40 of the *Code of Federal Regulations* Parts 1500–1508 (40 CFR Parts 1500–1508) and 10 CFR Part 1021, respectively). An important part of the NEPA process is solicitation of public comments on a draft EIS and consideration of those comments in preparing a final EIS. DOE distributed copies of the *Draft SSFL Area IV EIS* to those Federal agencies, State and local governmental entities, American Indian tribal governments, and members of the public known to be interested in or affected by implementation of the alternatives evaluated in the EIS, as well as those organizations and individuals who requested a copy. Copies also were made available on the Internet and in regional public libraries.

On January 13, 2017, the U.S. Environmental Protection Agency (EPA) published a notice in the *Federal Register* (FR) on behalf of DOE, announcing the availability of the *Draft SSFL Area IV EIS* (82 FR 4336). A 60-day comment period, from January 13 to March 14, 2017, was announced to provide time for interested parties to review and comment on the *Draft SSFL Area IV EIS*. DOE decided to extend the comment period based upon several requests for extensions. On March 17, 2017, EPA published an amended *Federal Register* notice announcing DOE's extension of the public comment period to April 13, 2017 (82 FR 14217). During the public comment period, DOE held two public hearings and a hearing for Native American groups to provide participants with opportunities to learn more about the content of the *Draft SSFL Area IV EIS* from exhibits, fact sheets, and other materials; hear DOE representatives present an overview of the results of the *Draft SSFL Area IV EIS* analyses; ask questions; and provide oral or written comments.

Table 1–1 lists the date and location of each hearing as well as the numbers of attendees and commenters. The attendance estimates are based on the number of registration forms completed and returned as well as a rough “head count” of the audience.

Table 1–1 Hearing Locations, Attendance, and Numbers of Commenters

<i>Location</i>	<i>Date</i>	<i>Attendance</i>	<i>Number of Oral Commenters</i>
Native American Hearing, DOE offices	February 17, 2017	7	3
Simi Valley, California	February 18, 2017	87	32
Van Nuys, California	February 21, 2017	73	43
Total		167	78

In addition, Federal agencies, State and local governmental entities, American Indian tribal governments, and members of the public were invited to submit comments via the U.S. mail or online at www.SSFLAreaIVEIS.com. **Table 1–2** lists the number of comment documents received by each method of submission.

Table 1–2 Numbers of Comment Documents Received by Method of Submission

<i>Method of Submission</i>	<i>Number of Comment Documents</i>
Online at www.SSFLAreaIVEIS.com	477
U.S. mail	104
Email	35
Campaigns ^a	660
Petitions ^a (Petition 1, signed by 7 individuals; Petition 2, signed by 10 individuals)	2
Public hearings (oral)	78
Public hearing (written)	7
Total	1,363

^a Campaign comments were submitted by U.S. mail or email and petitions were submitted via U.S. mail.

Upon receipt, all written comment documents were assigned a document number for tracking during the comment response process. Each commenter in the transcripts from the public hearings also was assigned a document number. All comment documents were then processed for inclusion in this CRD. In processing the comment documents, each document was analyzed to identify individual comments (which were numbered sequentially) and DOE prepared responses to each numbered comment. DOE responded to all comments received, including the few received after the end of the comment period, April 13, 2017 in preparing this *Final SSFL Area IV EIS*. Comments that DOE determined to be outside the scope of the *SSFL Area IV EIS* are acknowledged as such in this CRD. The remaining comments were then reviewed and responded to by policy experts, subject matter experts, and NEPA specialists, as appropriate. This CRD presents the comment documents, including the campaign letters,¹ as well as the public hearing transcripts and DOE’s responses to the comments. **Figure 1–1** illustrates the process used for collecting, tracking, and responding to the comments.

The comments and DOE responses were compiled in a side-by-side format, with each identified comment receiving a separate response. All comments and responses are numbered with a comment identification number to facilitate matching a comment with its response.

¹ A letter was considered to be part of a campaign, if a significant number of letters were received with the same text appearing in the body of the letters.

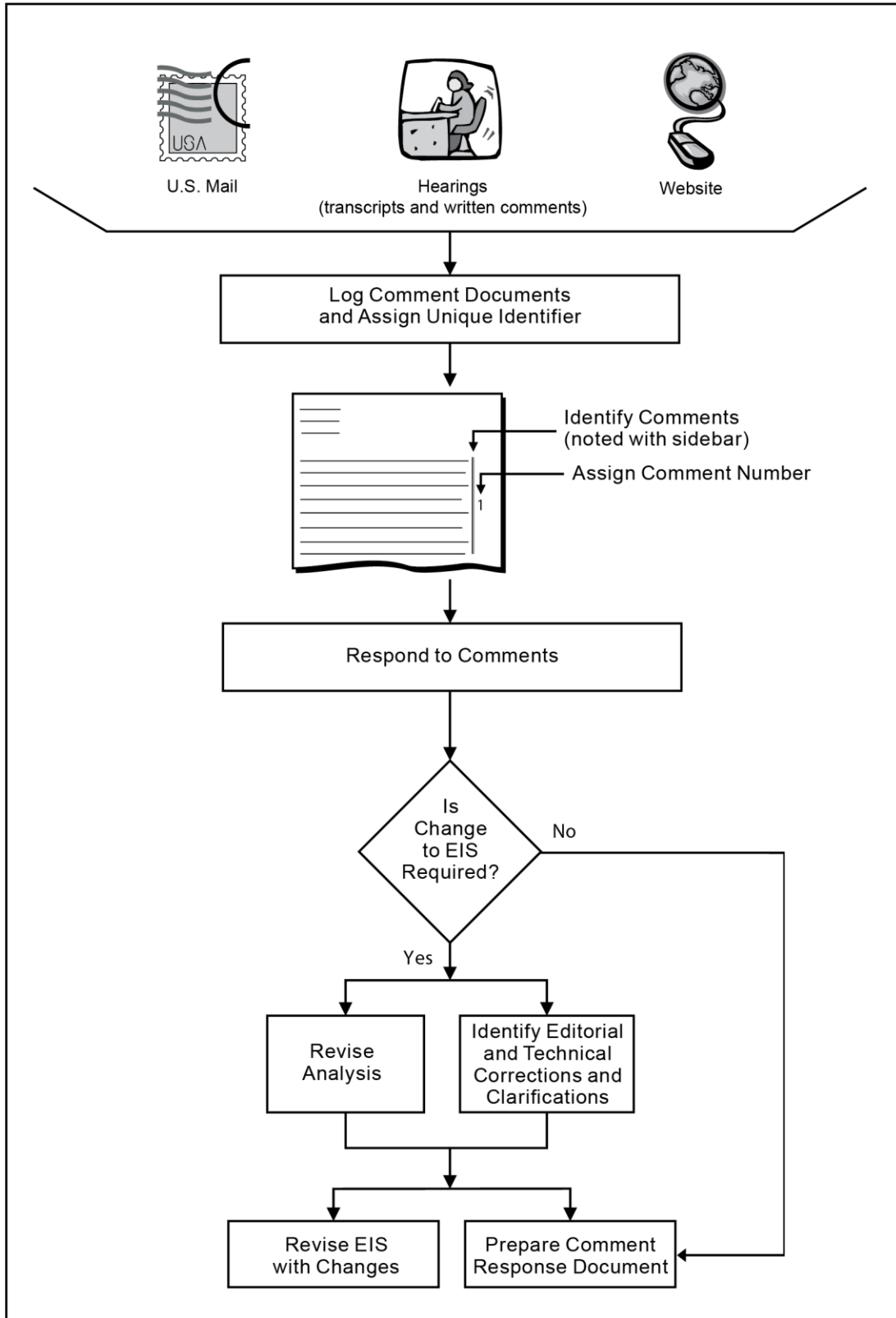


Figure 1-1 Comment Response Process for the *Final SSFL Area IV EIS*

During preparation of this *Final SSFL Area IV EIS* all comments received on the *Draft SSFL Area IV EIS* were considered and responses were prepared. This effort served to focus the revision process and ensure consistency throughout the final document. The comments assisted in determining whether the alternatives and analyses presented in the *Draft SSFL Area IV EIS* should be modified or augmented, whether information presented in the *Draft SSFL Area IV EIS* needed to be corrected or updated, and whether additional clarification was necessary to facilitate better understanding of certain issues. Change bars in the margins of pages in Volumes 1 and 2 of this *Final SSFL Area IV EIS* indicate where substantive changes were made and where text was added or deleted. Editorial changes are not marked.

1.2 Public Hearing Format

The two public hearings and a hearing for Native American groups were designed to provide information about the NEPA process, DOE's proposed action, and the results of analysis of alternatives presented in the *Draft SSFL Area IV EIS* and to invite public comments on the document. A court reporter was present at all three hearings to record and prepare a transcript of the comments that were expressed at the hearing. These transcripts are included in Section 3 of this CRD. Written comments were also collected at the hearings. Comment forms were available at the hearings for anyone wishing to use them.

Before each public hearing and the hearing for Native American groups, DOE hosted an open house where poster displays were presented on various topics known to be of interest to the public, including the NEPA process and the alternatives evaluated in the *Draft SSFL Area IV EIS*. The displays were staffed by DOE subject matter experts who were knowledgeable of the analyses presented in the *Draft SSFL Area IV EIS* and able to respond to questions. Attendees were invited to view the displays and ask questions of the subject matter experts prior to the formal hearings.

The DOE Site Manager for the Energy Technology Engineering Center (ETEC) opened all three hearings with welcoming remarks and a brief history of ETEC. The DOE NEPA Document Manager then provided an overview of the *Draft SSFL Area IV EIS* and the NEPA process. Following the overview presentation, a meeting moderator opened the comment session. A time limit was established to ensure that everyone who wished to speak would have an opportunity to provide oral comments. Everyone who was asked to conclude their remarks to comply with the time limitation was encouraged to provide additional comments in writing. As part of the comment response process, the transcripts and written comments collected at the hearings were reviewed for comments on the *Draft SSFL Area IV EIS*, as described in Section 1.1 of this CRD.

1.3 Organization of this Comment Response Document

This CRD is organized into the following sections:

- Section 1 describes the public comment process for the *Draft SSFL Area IV EIS*, the format used in the hearings on the *Draft SSFL Area IV EIS*, the organization of this document and how to use this CRD, and the changes made by DOE to the *Draft SSFL Area IV EIS* in preparing the *Final SSFL Area IV EIS* in response to the public comments.
- Section 2 presents topics of interest from the public comments received on the *Draft SSFL Area IV EIS* that required a detailed response or appeared frequently in the comments as well as DOE's response to each topic of interest.
- Section 3 presents comment documents received via the *SSFL Area IV EIS* website, email, and U.S. mail, as well as the transcripts of the oral comments and written comments received during

the hearings. The comment documents and DOE’s responses to the comments delineated within each comment document are presented side by side.

- Section 4 lists the references cited in this CRD; the references are available at www.SSFLAreaIVEIS.com.

1.4 Changes from the *Draft SSFL Area IV EIS*

In preparing this *Final SSFL Area IV EIS*, DOE made revisions to the *Draft SSFL Area IV EIS* in response to comments received from other Federal agencies and State and local government entities; American Indian tribes; and the public. In addition, DOE updated information due to events or the availability of information in other documents that were not completed in time to be incorporated into the Draft EIS that was released for public comment in January 2017. DOE also changed this to provide more environmental baseline information, update project data, and revise consequence analyses, as well as to correct inaccuracies, make editorial corrections, and clarify text. Vertical change bars appear alongside such changes in Volumes 1 and 2 of this Final EIS. Editorial changes are not marked. The following summarizes the major changes made to the *Final SSFL Area IV EIS*.

Public Comment Period and Comments Received on the *Draft SSFL Area IV EIS*

Sections 1.10.5 and S.8.2 were added to the Final EIS in Chapter 1 and the Summary, respectively, to describe the public comment period on the Draft EIS and the types of comment received.

Changes Made for the *Final SSFL Area IV EIS*

Sections 1.9.6 and S.9 were added to Chapter 1 and the Summary, respectively, to list the substantive changes made to the Draft EIS in preparing the Final EIS.

Additional Studies and Reports

Sections of this Final EIS were updated based on new reports, studies, and agreements that became available after publication of the Draft EIS. These reports include:

- *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a)
- *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b)
- Report on the results of groundwater pumping as an interim measure at the Former Sodium Disposal Facility (CDM Smith 2018c)
- 2015 and 2017 archaeological studies² (Corbett et al. 2015; CH2M Hill 2017)
- Results from Bravo Bedrock Vapor Extraction Treatability Study³ (CH2M Hill 2015)
- U.S. Fish and Wildlife Service Biological Opinion for the Cleanup of Area IV of the Santa Susana Field Laboratory, Ventura County, California (see Appendix J of this Final EIS)
- *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (DTSC 2017b)

Boeing Land Use Covenants

This Final EIS was revised to reflect the Grant Deeds of Conservation Easement and Agreement (Ventura County 2017a, 2017b) executed by Boeing and North American Land Trust, which restrict

² While completed prior to the publication of the Draft EIS, the document was completed in time to be incorporated into the Draft EIS.

³ See preceding footnote.

future land use of Boeing's property to open space, including the property DOE is cleaning up. In April and November 2017, Boeing made legally binding commitments to conservation easements held by North American Land Trust that permanently preserve as open space habitat nearly 2,453 acres of land that Boeing owns at the Santa Susana Field Laboratory (SSFL), which includes Area IV and the NBZ. In accordance with the easement, "the Property shall be managed and maintained in a manner such that any use of the Property must be consistent with preservation, protection, and maintenance in perpetuity of the Conservation Values of the Property..." Those conservation values are identified as significant natural, ecological, cultural, historic, aesthetic, educational, scientific, scenic, and open space values. The conservation easement is a legally enforceable document that, among other restrictions, forever prohibits residential, agricultural, or commercial development or uses of the site.

Updates to Alternatives

In response to comments on the Draft EIS regarding volume estimates, DOE re-evaluated the geographical information system (GIS) and soil characterization data used in estimating the area and volume of soil subject to remediation. This resulted in minor adjustments to a revised estimate of the total volume of soil estimated to exceed the *Administrative Order on Consent for Remedial Action* (AOC) Look-Up Table (LUT) values of 1,616,000 cubic yards compared to 1,413,000 cubic yards presented in the Draft EIS. The re-evaluation also resulted in a revised estimate of the volume of soil, following adjustments for soil that exceeds the AOC LUT value for total petroleum hydrocarbons (TPH) only and the areas in which the exemption process would be applied. The volume of soil to be removed under the Cleanup to AOC LUT Values Alternative following these adjustments is 881,000 cubic yards, compared to 933,000 cubic yards evaluated in the Draft EIS. Information regarding soil volume calculations is included in Appendix D.

To fully reflect future land use in accordance with the Boeing conservation easements described above, DOE modified the Conservation of Natural Resources Alternative to include two scenarios. The first scenario uses risk-based cleanup levels based on the exposure scenario as evaluated in the Draft EIS, which is, an onsite resident with no garden. A second scenario was added to more accurately reflect the future open space use of the site; it establishes risk-based cleanup levels commensurate with exposure of an onsite recreational user.⁴ The soil remediation alternatives, including the two Conservation of Natural Resources scenarios, were also revised to account for removal of an area of mercury-contaminated soil and to reflect risk-based protection of ecological resources.

Substantial changes in the volume of soil requiring removal under the Conservation of Natural Resources Alternative resulted from the performance of additional risk assessments. The more extensive risk assessments resulted in reductions in volumes of soil requiring removal for the identified exposure scenarios. In this Final EIS, the Conservation of Natural Resources, Residential Scenario would remove 52,000 cubic yards of soil. In the Draft EIS, this same scenario was estimated to remove 148,000 cubic yards of soil. A discussion of the basis for and the process that resulted in the reduced volumes is presented in Appendices D and K.

In the Draft EIS, the area and volume of soil that would be remediated in areas in which the exemption process would be applied were not quantified, but were expected to be a small increment. The additional risk assessment work combined with the re-evaluation of GIS and soil characterization data conducted in developing this Final EIS shows that about 4 acres would require cleanup in the areas in which the exemption process would be applied.

In response to comments and based on a construction-estimating evaluation (DOE 2018), the level of operations and the daily number of trucks hauling Area IV soil and backfill was revised. Rather than 32

⁴ Impacts to an onsite recreational user were addressed in the Draft EIS under all alternatives. However, cleanup levels (this alternative scenario that is addressed in the Final EIS) were not based on this receptor in the Draft EIS.

to 48 heavy-duty truck round trips per day, a lower number of 16 daily truck trips was used. This extended the planning-level schedule for completion from 10 to 26 years for the Cleanup to AOC LUT Values Alternative; from a little over 3 to 6 years for the Cleanup to Revised LUT Values Alternative; and from a little over 1 to less than 2 years for the Conservation of Natural Resources Alternative (both scenarios).

Use of Risk rather than Dose in Risk Assessments

In this Final EIS, the risk assessments performed for determining areas requiring remediation under the Conservation of Natural Resources Alternative (both scenarios) used the target risk range for alternatives of 1×10^{-6} to 1×10^{-4} (1 in 10,000 to 1 in 1 million) to evaluate cleanup of soil with radioactive constituents. Soil with radioactive constituents would be removed to ensure that the risk to an onsite user (either a hypothetical resident or recreational user) following remediation would not exceed the upper end of the risk range. This is different than the approach presented in the Draft EIS, which used 25 millirem per year plus ALARA [as low as reasonably achievable] for cleanup of radioactive constituents. Cleanup that results in cancer incidence that falls within the risk range would be well below the 25 millirem per year dose objective of DOE Order 458.1.

Sensitivity Analyses

DOE added a sensitivity evaluation appendix (see Appendix L) to evaluate how various uncertainties or possible changes would affect environmental consequences. In response to public comments, a sensitivity evaluation of the Cleanup to AOC LUT Values Alternative was added. The purpose of the evaluation, which assesses the potential impacts if all areas exceeding the AOC LUT values were excavated and removed from the site, was two-fold. It serves as a comparison point for commenters who believed that DOE's application of the 2010 AOC exemption process for protection of biological and cultural resources was overly broad and/or objected to use of natural attenuation to treat certain low-concentration contaminants. It also responds to commenters who suggested that DOE's volume estimates may be low for the Cleanup to AOC LUT Values Alternative.

Sensitivity evaluations were included for all soil remediation alternatives to evaluate the effects of events (e.g., funding constraints, weather events) that may result in remediation proceeding at a slower rate than anticipated under the base case analyses (that is, the soil remediation action alternatives evaluated in Chapter 4, Environmental Consequences). For these sensitivity evaluations, it was assumed that remediation would proceed at about half the rate as under the base cases, thereby essentially doubling the durations.

A sensitivity evaluation of the Building Removal Alternative was performed to evaluate the effects of accelerating building demolition activities. The sensitivity evaluation assumes that building demolition and removal of debris from the site would be completed in about a year's time rather than the 2 to 3 years evaluated under the Building Removal Alternative.

Updated Alternative Concepts Considered but Dismissed from Detailed Study

Chapter 2, Section 2.2.3, Alternative Concepts Considered but Dismissed from Detailed Study, was revised to provide additional information regarding transportation options that were considered but not studied in detail. The revised Section 2.2.3 includes information based on the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (Draft Program EIR)* (DTSC 2017b). Transportation options considered include use of roads other than Woolsey Canyon Road for truck travel to and from SSFL; construction of overland conveyor systems move soil to a truck or train loading station; and transporting contaminated soil as a slurry in a pipeline.

Preferred Alternative

At the time the Draft EIS was prepared, DOE did not have a preferred alternative.⁵ DOE has identified its preferred alternative in this Final EIS.

DOE's preferred alternative for soils remediation is the Conservation of Natural Resources, Open Space Scenario. DOE is identifying this as the preferred alternative because it would be consistent with the risk assessment approach typically used at other DOE sites, other Department of Toxic Substances Control (DTSC)-regulated sites, and EPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites that accounts for the specific future land use of the site. Use of a risk assessment approach is consistent with the process being used by Boeing for the land it owns at SSFL and recognizes the Grant Deeds of Conservation Easement and Agreements (Ventura County 2017a, 2017b) that commit Boeing's SSFL property, including Area IV and the NBZ, to remaining as open space. This scenario would use a CERCLA risk assessment approach that would be protective of human health and the environment rather than LUT values (action levels). The 2010 AOC, Section 6.2, allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects to engage DTSC in discussions about such changes in order to implement this soil remediation alternative.

For building demolition, DOE's preferred alternative is the Building Removal Alternative. Under this alternative DOE would demolish the 18 DOE-owned buildings in Area IV and transport the resulting waste off site for disposal. Demolition of thirteen facilities and disposition of the resulting debris would be in accordance with DOE requirements and applicable laws and regulations. Three facilities at the Radioactive Materials Handling Facility (RMHF) and the two facilities comprising the Hazardous Waste Management Facility (HWMF) would be closed in accordance with DTSC-approved RCRA facility closure plans.

DOE's preferred alternative for groundwater remediation is a combination of the Monitored Natural Attenuation Alternative and the Treatment Alternative. DOE would treat groundwater plumes with higher concentrations of contaminants (the Former Sodium Disposal Facility, Hazardous Materials Storage Area, Building 4100/56, and Building 4057 plumes) in accordance with the results of the final Corrective Measures Study. Source removal is the preferred action for the strontium-90 source. Monitored natural attenuation would be used for plumes that are not amenable to active treatment – the two plumes with the lowest concentrations of trichloroethylene (TCE) (the Metals Clarifier and RMHF plumes) and the tritium plume. DOE's proposed groundwater remedial actions would be included in the final Corrective Measures Study submitted to DTSC for approval.

Updated Groundwater Characterization Information

DOE has completed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4, of this Final EIS was updated with information from the draft remedial investigation report, including a reference to the detailed discussion of the site's geology; a summary of the conceptual site model of three-dimensional groundwater flow and contaminant migration at the site; updated information on the magnitude and extent of the existing groundwater contamination plumes in Area IV and the NBZ; and additional information on the impact

⁵ The preferred alternative is the alternative an agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical, and other factors. A preferred alternative, if one or more exists, must be identified in the Final EIS unless another law prohibits the expression of such a preference (40 CFR 1502.14(e)). It is not the agency's final decision regarding the selection of an alternative to implement. That decision is presented to the public in the Record of Decision which cannot be published until at least thirty days after publication of the Final EIS (40 CFR 1506.10).

of fine-grained units on the groundwater flow and contaminant migration. A figure was added to this Final EIS to show the current location of known groundwater seeps.

Updated Information on Groundwater Remedies

The *Draft Area IV RCRA Corrective Measures Study, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018b) was completed after publication of the Draft EIS. This Final EIS incorporates additional groundwater remedies identified in the draft corrective measures study.

Stormwater Control Plan

DOE added information to this Final EIS in Chapter 4, Section 4.3.1 regarding the Stormwater Pollution Prevention Plan (SWPPP) that will be developed for soil remediation actions. The Final EIS notes that the SWPPP will be developed in coordination with and incorporate all appropriate runoff control measures recommended by the Stormwater Expert Panel (an independent committee of experts who have been providing guidance on stormwater control for SSFL to Boeing and the Los Angeles Regional Water Quality Control Board since 2008). This Final EIS also notes that the SWPPP would detail the potential configuration and design of the additional erosion control measures required by Mitigation Measure SW-2 to respond to any runoff from the site that exceeds the design capacity of the best management practices and National Pollutant Discharge Elimination System monitoring locations identified in Section 4.3.1, along with the avoidance measures identified by Mitigation Measure SW-1.

Protection of Biological Resources

Prior to and subsequent to issuance of the Draft EIS, DOE consulted with the U.S. Fish and Wildlife Service (USFWS) in compliance with the Federal Endangered Species Act (ESA) and the California Department of Fish and Wildlife (CDFW). The purpose of the consultation was to comply with regulatory requirements and identify ways to avoid potential impacts on rare, threatened, and endangered species and develop appropriate measures to mitigate or offset project-caused impacts on listed species populations and their essential habitats. As a result of DOE's analysis and this process, DOE identified proposed areas where the exemption process would be applied in the Draft EIS. The areas proposed for application of the exemption process in this Final EIS reflect a continuation of consultations with USFWS and CDFW, as well as input received in the public comments.

The 2010 AOC explicitly provides for exemptions to cleanup for impacts to species or habitat protected under the ESA. In addition to complying with the ESA, DOE has a responsibility to protect species and habitats in accordance with other laws and regulations. This Final EIS was revised to reflect completion of the consultation process with USFWS, which included DOE's preparation and submission of a biological assessment to USFWS and USFWS issuing a biological opinion (see Appendix J); biological resources (species and habitat protected under the ESA) will be protected in accordance with the results of the biological opinion. In order to comply with State and local laws and regulations and based on consultation with CDFW and comments from Ventura County, DOE also proposed areas in which the exemption process would be applied for the protection of State-listed species, sensitive species, and sensitive habitats. The Final EIS was also revised to reflect that the soil remediation plan (referred to as a soil remedial action implementation plans [SRAIP] in the 2010 AOC) to be prepared by DOE and approved by DTSC will reflect the final determination of cleanup areas, including identification of the areas in which the exemption process would be applied.

Ecological Risks

In response to public comments on the Draft EIS, this Final EIS more quantitatively addresses ecological risk. Ecological RBSLs (similar in concept to human health RBSLs) were identified for biota. These were used to evaluate potential risk impacts to ecological resources from soil with chemical constituents in concentrations that exceed these ecological risk based levels. Where appropriate, the

Final EIS reflects cleanup levels that are based on human health risks and ecological risks (see Appendix K).

Onsite Human Health Impacts

In response to comments, DOE added a quantitative evaluation of human health impacts to potential onsite post-remediation receptors for all alternatives, see Appendix K for a discussion of the evaluation. These post-remediation receptor scenarios include an onsite recreational receptor and an onsite suburban resident (without a garden). The modeling results are included in Chapter 4, Section 4.9 of this Final EIS.

Offsite Human Health Impacts

Potential risks to the offsite public under all proposed alternatives were added to Chapter 4, Section 4.9, of this Final EIS. Impacts were evaluated both during remediation and post-remediation. Potential impacts were calculated for a recreational user and a suburban resident with a garden. A discussion of the potential cumulative impacts on human health for the offsite public was added to Chapter 5, Section 5.5.9, of this Final EIS.

Protection of Cultural Resources

Chapter 4, Section 4.11, of this Final EIS was revised to clearly address inadvertent discovery of cultural resources during cleanup activities and cleanup within exemption areas. Text was added to acknowledge the possibility of identifying previously unrecorded resources during soil removal and building demolition and to indicate that procedures in the National Historic Preservation Act, Section 106 programmatic agreement⁶ would be followed if such resources are discovered. The text was also revised to correct statements implying that cleanup would not occur in the areas in which the exemption process is applied. Cleanup would occur in the areas in which the exemption process is applied to remove chemicals or radionuclides that exceed risk-based cleanup criteria. These cleanups would be carefully planned and executed to minimize impacts on cultural resources.

Childcare Centers, Preschools, Parks, and Recreation Centers

In this Final EIS, DOE added the locations of childcare centers, preschools, parks, and recreation centers, in addition to schools, to its evaluation of truck traffic and potential adverse effects on children.

Revised Information for NASA and Boeing Activities

The soil volumes and other cumulative impacts information presented in Chapter 5, Table 5–1, of the Draft EIS were up to date at the time of its publication. Subsequent to release of the Draft EIS in January 2017, new information became available (Boeing 2017a, 2017b; NASA 2017b). Therefore, the NASA and Boeing values in Table 5–1 were updated in this Final EIS to reflect the latest information.

Additional Laws, Regulations, Permits, and Agreements

Additional laws, regulations, permits, and agreements were added to Chapter 8 of this Final EIS including:

- Access Agreement between DOE and Boeing, dated December 20, 2013
- New Requirements
 - Mandatory Commercial Organics Recycling (Assembly Bill Number 1826) (signed by Governor Brown October 2014)

⁶ This programmatic agreement is being developed through consultation with the SHPO, the Santa Ynez Band of Chumash Indians, members and representatives of other tribes, and other consulting parties.

- Potential Permits or Approvals
 - U.S. Army Corp of Engineers, Clean Water Act Section 404 permit
 - California Department of Fish and Wildlife, Streambed Alteration Agreement
 - Los Angeles Regional Water Quality Control Board, Section 401 Water Quality Certification
 - Ventura County, Oak Tree Permit

1.5 Next Steps

Based on this *Final SSFL Area IV EIS* and consistent with the requirements of NEPA, DOE may announce a decision regarding future actions in one or more Records of Decision (RODs). A ROD is to be issued no sooner than 30 days after the EPA publication of the Notice of Availability of the *Final SSFL Area IV EIS* in the *Federal Register*. The ROD would describe the alternative(s) selected for implementation and explain how environmental impacts will be avoided, minimized, or mitigated. For example, DOE could proceed with demolition of non-RCRA-permitted buildings following issuance of the ROD. A number of other actions would be necessary prior to DOE undertaking soil or groundwater remediation or demolition of RCRA-permitted buildings. DTSC must complete the program EIR and issue a finding in accordance with the California Environmental Quality Act. In accordance with the 2010 Administrative Order on Consent (2010 AOC) (DTSC 2010), and the approval process described in the *Draft Program EIR* (DTSC 2017b), soil remediation could begin following DOE preparation and DTSC approval of a soil remediation plan. Prior to DTSC approval however, the soil remediation plan would be subject to public review and comment. Groundwater remediation could begin following DOE submittal and DTSC approval of the DOE-prepared Final Corrective Measures Study that describes remediation methods for each groundwater plume and the strontium-90 contaminated bedrock. Demolition of RCRA-permitted DOE buildings is contingent on DTSC approval of the facility closure plans that DOE has submitted; DTSC made the draft plans available for public review in August 2018.

SECTION 2
TOPICS OF INTEREST

2.0 TOPICS OF INTEREST

Upon review of the comments received on the *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS)*, the U.S. Department of Energy (DOE) identified several topics of interest to be addressed in this section of the Comment Response Document (CRD). These include topics of broad interest or concern as indicated by their recurrence in comments or technical topics that warrant a more detailed discussion than might be afforded in responding to an individual comment. This section summarizes the comments received on a topic of interest, followed by DOE's response:

- Preferences for cleanup
- Compliance with the 2010 Administrative Order on Consent (AOC)
- Suitable backfill soil
- Application of exemptions under the 2010 AOC
- Toxicity of soil contaminants
- Comparison of radiation doses
- Offsite impacts
- Cancer and other illnesses near Santa Susana Field Laboratory (SSFL)
- Options for transportation of waste from SSFL
- Public perceptions about waste and contamination in Area IV

2.1 Preferences for Cleanup

Comment Summary

Many commenters expressed support for a particular alternative, especially among the alternatives evaluated for soil remediation. With respect to soil remediation, several commenters stated either an explicit or implied preference for the Cleanup to AOC Look-Up Table (LUT) Values Alternative. These commenters called for removal of radioactive and hazardous wastes from Area IV and the Northern Buffer Zone (NBZ) of SSFL to background levels in accordance with the 2010 AOC (2010 AOC). Reasons for this preference generally centered on concerns about contamination migrating off site, impacts on human health, and impacts on plants and animals. In addition, commenters supporting this alternative felt that DOE should uphold its commitment to abide by the 2010 AOC.

Other commenters stated a preference for the site to be cleaned up based on a calculated risk. Some with this preference specifically referenced a cleanup in accordance with the Conservation of Natural Resources Alternative; some of these commenters indicated that their second choice would be the Cleanup to Revised LUT Values Alternative. Commenters indicated that they supported this alternative because it provides a risk-based cleanup that is consistent with typical U.S. Environmental Protection Agency (EPA) practice for calculating ecological and human health risks, suitable for the future end use of the site as open space, minimizes environmental impacts to biological and cultural resources, and minimizes the amount of contaminated soil to be excavated from the site and transported along local roads. Some commenters also stated that this alternative would be more cost effective than other alternatives.

A commenter expressed support for the Cleanup to Revised LUT Values Alternative.

A number of commenters supported cleanup of SSFL but did not reference a specific alternative.

With respect to building demolition, commenters who did express an opinion were generally in favor of removing the buildings as proposed under the Building Removal Alternative.

With respect to groundwater remediation, some commenters expressed a preference for the Monitored Natural Attenuation Alternative. Other commenters expressed an objection to the Monitored Natural Attenuation Alternative. The reason for their objection was related to the long duration (70 years or longer) that would likely be needed for some constituents to attenuate.

Response

DOE appreciates and acknowledges the commenters' preferences for cleanup of SSFL and notes there were a variety of preferences expressed by commenters, some for a cleanup in accordance with the 2010 AOC (DTSC 2010) and others for a cleanup based on risk. DOE reiterates the Council on Environmental Quality (CEQ) statement that "Commenting is not a form of 'voting' on an alternative" (CEQ 2007). The number of comments received for or against a particular alternative does not dictate the action that a Federal agency must take.

As discussed in Chapter 1, Section 1.3 of this environmental impact statement (EIS), there are multiple parties responsible for cleanup at SSFL. This EIS evaluates the potential environmental impacts associated with remediating the portions of SSFL for which DOE is responsible, that is, Area IV and the NBZ. In addition to DOE, the National Aeronautics and Space Administration (NASA) and Boeing are responsible for remediating portions of SSFL. NASA is responsible for cleanup of Area II, a portion of Area I, and portions of the NBZ impacted by NASA operations. Boeing is responsible for cleanup of Areas I and III and for demolition of four company-owned buildings in Area IV. Boeing and NASA cleanup activities are only considered in this EIS as part of cumulative impacts (Chapter 5).

As discussed in Chapter 1, Section 1.3 of this EIS, DOE has removed all nuclear material from Area IV at SSFL, all but 22 buildings (18 owned by DOE and 4 owned by Boeing) of the 272 structures that were used during its operational period at Area IV, and much of the radioactive and chemical contamination within the soil and remaining buildings that resulted from nuclear research activities. For further details, see Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," in this CRD.

DOE proposes to complete remediation of Area IV and the NBZ in accordance with applicable requirements for cleanup of radiological and chemical substances. In accordance with the National Environmental Policy Act (NEPA) and CEQ and DOE NEPA implementing regulations, this EIS evaluates a No Action Alternative and several reasonable action alternatives for conducting cleanup activities (for soil remediation, building demolition, and groundwater remediation) in Area IV and the NBZ at SSFL. DOE evaluated three action alternatives for soil remediation (one that evaluates two scenarios), one action alternative for building demolition, and two action alternatives for groundwater remediation (the Groundwater Treatment Alternative includes a variety of possible technologies, for example, pump and treat, bedrock vapor extraction, and source removal). The purpose of evaluating a range of reasonable alternatives under NEPA is to provide comparative and objective information for consideration by the public and the decision-maker about the impacts of multiple alternative approaches to accomplishing the Federal government's proposed action. In developing these alternatives, DOE considered comments received during scoping and from an alternatives development workshop involving community members. Evaluating a range of reasonable alternatives provides information to the public and decision-makers about the relative

environmental impacts of each of the alternatives. Refer to Chapter 2 of this EIS for a description of the alternatives evaluated and a summary of the potential environmental impacts.

DOE considered all of the comments received on the Draft EIS in the development of this Final EIS. While the Final EIS identifies preferred alternatives for soil remediation, building demolition, and groundwater remediation (Chapter 2, Section 2.7), DOE has not made a decision on the remediation actions to be taken in Area IV and the NBZ. DOE will announce its decision in one or more Records of Decision (RODs), issued no sooner than 30 days after publication in the *Federal Register* of the EPA Notice of Availability for this Final EIS. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by the DOE decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation. The ROD(s) will present DOE's decisions regarding cleanup (describe the alternative(s) selected for implementation and explain how environmental impacts will be avoided, minimized, or mitigated) and describe the factors considered in making those decisions.

As discussed in Chapter 1, Section 1.9.2 of this EIS, the Department of Toxic Substances Control (DTSC) is preparing a program environmental impact report (program EIR) under the California Environmental Quality Act. The report addresses cleanup of the entire SSFL (Areas I, II, III, and IV and the Northern and Southern Buffer Zones). The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (Draft Program EIR)* (DTSC 2017b) was issued in September 2017. The *Draft Program EIR* addresses cleanup actions to be undertaken by NASA and Boeing, in addition to DOE's cleanup actions in Area IV and the NBZ. The *Draft Program EIR* evaluates potential environmental impacts and mitigations that will be considered by DTSC in selecting soil and groundwater remediation to be implemented at SSFL. DTSC will issue a Notice of Determination identifying its selected remedial actions. While similar, DOE's EIS and DTSC's program EIR are separate efforts and the completion of each is not dependent upon the other. Implementation of the selected alternative for DOE's 13 buildings that are not regulated under the Resource Conservation and Recovery Act (RCRA) could begin following issuance of a ROD for this EIS. Other cleanup of Area IV and the NBZ will not begin until DOE and DTSC have reached agreement about how the cleanup will be implemented. Specific remedial actions will be included in documents prepared by DOE and approved by DTSC: soil remediation plans (called Soils Remedial Action Implementation Plans [SRAIPs] in the 2010 AOC); the final Corrective Measures Study for groundwater; and facility closure plans for buildings regulated by DTSC (i.e., RCRA-permitted buildings).

2.2 Compliance with the 2010 Administrative Order on Consent

Comment Summary

Many individuals indicated that DOE is breaking its legal commitment and commitment to the public by not following the 2010 AOC. Also, a number of commenters stated that none of the alternatives for soil remediation evaluated in the Draft EIS meets all of the requirements of the 2010 AOC. Commenters indicated that the action alternatives presented in the Draft EIS would leave behind up to 39 percent (under the Cleanup to AOC LUT Values Alternative), 91 percent (under the Cleanup to Revised LUT Values Alternative), or 99 percent (under the Conservation of Natural Resources Alternative) of the contaminated soil. Many of these commenters stated their desire that DOE conduct the cleanup at Area IV and the NBZ at SSFL in accordance with the standards set forth in the 2010 AOC and expressed concern that, by not doing so, the extent of the cleanup would be reduced and would put the public at an increased health risk. Finally, some commenters observed that the cleanup was not completed by 2017 as stated in the 2010 AOC.

Response

DOE Actions Taken to Comply with the 2010 AOC

DOE received comments implying that DOE was not complying with the 2010 AOC, that in preparing this EIS, DOE violated the AOC, and that DOE was trying to get out of the AOC. Since signing the AOC in December 2010, DOE has and will continue to comply with the AOC. The text below demonstrates of how DOE has complied with the 2010 AOC.

Section 2.4 of the 2010 AOC identified an interagency agreement between DOE and EPA providing for EPA to conduct a radiological soil background study and a radiological investigation of Area IV and the NBZ. This agreement was established in 2010 and EPA investigations – a background study; records review; gamma surveys; and soil, sediment, and groundwater sampling – were initiated in 2010. All EPA studies were completed by 2012, with final reports issued in December 2012.

Section 2.5 of the 2010 AOC describes required soil chemical investigation activities. Section 2.5.1 directed DOE to conduct co-located (chemical and radionuclide) sampling with EPA with the samples to be provided to DTSC or its designee for chemical analysis. This work was initiated with EPA in October 2010 and completed in 2012. Section 2.5.2 also directed DOE to conduct random soil sampling with EPA with these samples also provided to DTSC or its designee. This work was also completed in 2012.

Section 2.5.3 of the 2010 AOC describes the required soil chemical data gap investigation. Working closely with DTSC staff and using the soil chemical data base in a geographic information system (GIS), soil data gaps were identified, sampling plans developed, and soil samples were collected throughout Area IV and the NBZ. Through a series of public meetings, the community also provided input to the selection of sampling locations. The data gap process and sampling were initiated in 2012, with soil sampling conducted in 2013 and 2014. Final reports were issued in 2015.

Section 2.6 of the 2010 AOC provides the basis for soil treatability studies. DOE contracted with California Polytechnic State University, San Luis Obispo and University of California, Riverside to perform the studies. The studies were scoped through a series of community meetings led by Sandia National Laboratory starting in 2011 and the studies implemented in 2012 and continued into 2014. Reports for the studies were issued in 2015.

Section 2.7 of the 2010 AOC requires DOE to prepare a Chemical Data Summary Report presenting all soil characterization data for Area IV and the NBZ. The *Draft Chemical Data Summary Report, Santa Susana Field Laboratory, Ventura County, California* was submitted to DTSC for review in January 2017 (CDM Smith 2017).

Section 3.0 of the 2010 AOC provides the public participation details. Throughout the scoping of the chemical soil investigations, DOE hosted a series of meetings with the community to review data needs and to obtain suggestions for sampling. The same was done for the soil treatability studies. Sampling documents and study plans were posted on the DOE web site for review.

Section 6.1 of the 2010 AOC recognizes that DOE is required to prepare this EIS under a court order. Section 6.2 acknowledges that once completed, DOE and DTSC may need to “make any necessary modifications” to the AOC. In compliance with NEPA, DOE was required to evaluate a full range of reasonable alternatives as analyzed in this EIS.

Section 7.11 of the 2010 AOC states that, “All actions taken pursuant to this Order by DOE shall be undertaken in accordance with applicable local, State, and federal laws and regulations.” DOE asserts that the impact analyses and mitigation/minimization measures discussed in this EIS were developed based on the requirement to comply with all laws, including air quality, water quality, endangered species protection, and cultural resource protection.

Section 8.0 of the 2010 AOC recognizes the potential need for modification of the AOC. DOE's evaluation of the implementability of the AOC has identified concerns that need to be addressed with DTSC. One example is the backfill requirement. DOE provided a letter to DTSC on the backfill issue in December 2016 (DOE 2016) and continues a dialog with DTSC.

The Agreement in Principle, which is an attachment to the AOC, addresses compliance with the Federal endangered species act. Because DOE is required to comply with applicable Federal, state, and local laws and regulations, DOE expanded in the EIS, protection of state-listed endangered species, and species of state and local importance. Per the AOC language, DOE engaged with U.S. Fish and Wildlife Service (USFWS) starting in 2009 and began discussions on endangered species protection and compliance. Through a series of meetings with USFWS, which were attended by DTSC and California Department of Fish and Wildlife (CDFW) staff, the exemption (exception) process was developed for endangered species protection. The exemption process analyzed in the EIS and the USFWS Biological Opinion are the outcomes of those meetings.

The Agreement in Principle also provides for protection of cultural resources. The Agreement in Principle uses the language "Native American artifacts that are formally recognized as Cultural Resources" for potential exemption (exception) from soil cleanup. Concerning the Native American artifacts exemption in the AOC, the particular application and scope of the phrase "Native American artifacts that are formally recognized as Cultural Resources" will be determined in cooperation with DTSC and in consultation with the California SHPO, Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties in the Section 106 process. DOE plans to propose exemptions for historic properties in the soil remediation plans submitted to DTSC for its review. The Final EIS does identify and analyze potential impacts to cultural resources. As described in Chapter 3, Section 3.11.1, of this EIS, DOE defines cultural resources for the purposes of impact analysis broadly to encompass definitions of cultural resources in NEPA and the CEQ NEPA implementing regulations, historic properties as defined in the National Historic Preservation Act (NHPA) Section 106 regulations, and Native American artifacts in the 2010 AOC (see Chapter 3, Section 3.11.1, including the text box titled "Types of Cultural Resources").

Throughout the process of implementing the 2010 AOC, DOE has worked closely with DTSC staff on technical issues. This includes the backfill issue, the need to incorporate natural occurring TPH chemicals in soil cleanup considerations, and the development of the exemption process to protect sensitive biological and cultural resources.

EIS Alternatives Compliance with the 2010 AOC

DOE remains committed to a cleanup of contamination in Area IV and the NBZ of the SSFL in a manner that is protective of human health and the environment. Under NEPA, DOE has a legal obligation to rigorously explore and objectively evaluate the potential environmental impacts of a range of reasonable alternatives for cleanup in this EIS. Chapter 2, Sections 2.3 and 2.4 of this Final EIS, describe the three action alternatives that DOE analyzed for soil remediation: (1) Cleanup to AOC LUT Values Alternative, (2) Cleanup to Revised LUT Values Alternative, and (3) Conservation of Natural Resources Alternative (a Residential Scenario and an Open Space Scenario). The latter two alternatives incorporate risk-based criteria and reflect recognition by DOE that concentrations in soil exceeding the 2010 AOC LUT values do not necessarily equate with harm to people.¹ The AOC LUT values were developed to represent background concentrations and are not associated with risk-based standards. The Conservation of Natural Resources Alternative

¹ EPA has developed screening criteria for chemical and radiological risks to humans (a measure of potential damage to human health or harm). These include the use of RBSLs based on exposure pathways and carcinogenic effects/toxicity of the chemicals and Preliminary Remediation Goals (PRGs) for radionuclides. The RBSLs and PRGs provide a basis with which to compare soil concentrations to determine whether the soil could pose a risk or be toxic under a specific exposure scenario.

considered impacts to two different onsite receptors – an onsite suburban resident (no garden) and an onsite recreational user (consistent with the area’s end use as open space). As required by CEQ NEPA regulations (40 CFR Part 1502.14), DOE also analyzed a No Action Alternative, which establishes a baseline against which the potential environmental impacts of the action alternatives can be compared.

DOE disagrees with commenters who assert that none of the alternatives evaluated in the EIS meets the technical elements of the 2010 AOC (DTSC 2010). The Cleanup to AOC LUT Values Alternative, described in Chapter 2, Section 2.3 of this EIS incorporates the technical elements of the 2010 AOC, that target cleanup to background levels or levels based on laboratory capabilities, as identified in the AOC LUT values.

DOE disagrees with the comment that not cleaning up soil contamination to 2010 AOC LUT values would put the public at an increased health risk that should be remediated. EPA scientists have spent years evaluating the concentrations at which chemicals manifest effects of toxicity. The results of the studies have been used to establish concentrations that scientists deem to be safe based on ingestion, inhalation, and skin exposure. Exceeding an AOC LUT value, but remaining below risk based screening level (RBSL), does not mean that a chemical is present at toxic levels (i.e., levels that manifest health effects following exposure). Similarly, exceeding an AOC LUT value for a radionuclide does not mean it presents a human health risk that requires remediation. Recognizing the difference between background cleanup requirements and risk-based criteria, this EIS analyzes alternatives that meet the purpose and need to be protective of the health and safety of the public and the environment that use risk to human health, as well as the protection of natural resources, to determine cleanup levels. The risk-based criteria approach is consistent with that used for cleanup actions at other DOE sites, other DTSC-regulated sites, and EPA Superfund sites. The comparative analysis of these alternatives allows the reader to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ. For further discussion of this topic, see Section 2.5, “Toxicity of Soil Contaminants,” in this CRD.

Commenters are correct in saying that varying amounts of material would remain on site under the three soil remediation action alternatives. Some commenters correctly indicated that the percentages were based on soil volumes with chemicals exceeding the AOC LUT values. Other commenters inaccurately referred to the percentages as the amount of contaminants that would remain on site. It is important to note that under any of the soil remediation action alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment that requires remediation, would be removed, including those within the areas in which the exemption process would be applied (see Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” in this CRD). Soils that would be left on site within areas where the exemption process would be applied or through the application of risk-based criteria would have concentrations of chemical and/or radioactive constituents lower than the risk-based levels identified for human health and ecological risk. Each of the three action alternatives analyzed in this EIS would leave SSFL Area IV and the NBZ safe for the designated future end use as open space and is consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear research development.

Cleanup to AOC Look-Up Table Values Alternative

The Cleanup to the AOC LUT Values Alternative described in Section 2.3.2 of this EIS is based on the technical elements and descriptions of soil cleanup provided in the 2010 AOC, summarized below:

1. Use of the LUTs published by DTSC for chemicals and radionuclides.

2. The chemical-by-chemical (radionuclide-by-radionuclide), point-by-point comparison of soil sample results with respective LUT values to identify exceedances.
3. Exemption criteria for the protection of biological and cultural resources that were discussed with DTSC, wildlife agencies, and the State Historic Preservation Office. This Final EIS reflects the exemption process based on the U.S. Fish and Wildlife Service (USFWS) Biological Opinion (Appendix J); interactions with the California Department of Fish and Wildlife (CDFW) and consideration of State and local laws and regulations for protection of State-protected species and sensitive habitats; compliance with the National Historic Preservation Act (NHPA) with respect to historic properties; and collaboration with Native American groups regarding other (non-NHPA) cultural resources.
4. Onsite treatment of soil. For purposes of analysis in the EIS, DOE included its best estimate of the volume of soil that would be addressed using in-situ treatment.²
5. Backfill soil cannot exceed local background levels (i.e., LUT values).

DOE used a GIS database for Area IV and the NBZ to identify, on a point-by-point basis, any sample location associated with one or more exceedances of any LUT value (provisional radionuclide LUT values published by DTSC on January 30, 2013 [DTSC 2013a] and chemical LUT values published on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of each exceedance, develop areas and depth of exceedances, and calculate soil volumes exceeding the AOC LUT values. For this Final EIS, the sample soil volume development process was independently reviewed by remediation engineers, and the volume calculations were validated.

DOE worked closely with DTSC staff and personnel from the USFWS and CDFW to develop a process for the application of 2010 AOC exemptions for protection of biological resources (see Appendix E, Table E-4 of this EIS). The wildlife agencies indicated their concurrence with the process in a CDFW letter dated December 8, 2016 (CDFW 2016) and a USFWS letter dated February 2, 2017 (USFWS 2017). DOE notes that the process developed for application of the exemptions was not an avoidance of the areas in which the exemption process would be applied for cleanup, but that the cleanup strategy involves removal of contaminated soil from these areas in instances where concentrations exceed human and ecological risk-based limits. For further discussion of the biological and cultural resources exemption process, see Section 2.4, “Application of Exemptions Under the 2010 Administrative Order on Consent,” in this CRD.

In addition, the 2010 AOC, Section 2.9, Item 5 allows consideration of *in situ* and onsite treatment of soils. In consultation with DTSC technical staff, DOE considered natural attenuation for chemicals reported as total petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs). Chemicals detected as TPH and PAHs can be naturally occurring and are continuously being created in the environment. Soil treatment studies found evidence that natural attenuation (degradation) of chemicals has been occurring at SSFL since they were first released and predicted that natural processes will continue (Nelson et al. 2015a). DOE therefore identified natural attenuation as a suitable means to treat the TPH-contaminated soil. No PAH-containing soil has, as yet, been identified as amenable to natural attenuation. However, during the development of soil remediation plans to be submitted to DTSC for approval, DOE may propose some additional small

² In response to public comments on the Draft EIS, in this Final EIS, DOE added a sensitivity evaluation of the Cleanup to AOC LUT Values Alternative (see Appendix L). The purpose of the evaluation was to assess the potential impacts if all areas exceeding the AOC LUT values were excavated and removed from the site. Under this scenario, ecological and cultural resources would not be protected as required by applicable regulations and the AOC, but it serves as a comparison point for commenters who objected to DOE’s proposed use of monitored natural attenuation to treat certain low-concentration chemical contaminants and to the application of the exemption process.

quantities of soils containing simple PAHs that may be amenable to natural attenuation. Implementing provisions in the 2010 AOC for *in-situ* treatment would result in approximately 620,000 cubic yards of soil exceeding AOC LUT values for TPH remaining on site; application of the exemption process to protect biological and cultural resources would result in about an additional 115,000 cubic yards of soil exceeding AOC LUT values remaining on site. This total of 735,000 cubic yards is approximately 45 percent of the 1,616,000-cubic-yard volume of soil exceeding AOC LUT values, but the concentration of chemical and radiological constituents in that volume of soil would be below risk-based levels.

Cleanup to Revised Look-Up Table Values Alternative

The Cleanup to Revised LUT Values Alternative was developed to address the decision error problems (e.g., identifying non-contaminated soil as contaminated) and other technical issues related to the AOC LUT values proposed by DTSC, see Section 2.3.3.1 of the EIS. These problems could be a factor in the finding that 42 percent of the sample locations at DTSC's background site fail to meet the AOC LUTs (the acceptable error rate is 5 percent) and could contribute to the inability to find backfill soil that meets the AOC LUT limits. Under this alternative, DOE proposed to substitute risk-based screening levels (RBSLs) as the soil cleanup criteria for the chemical constituents that have chemical LUT values (when an RBSL is below the AOC LUT value for a given chemical constituent, the LUT value would be used). Radiological LUT values under this alternative are the same as used in the Cleanup to AOC LUT Value Alternative. By doing so, the soil background site and previously evaluated potential sources of backfill borrow soil would meet the revised LUT values. Cleanup under this alternative would mean that all radionuclides that exceed provisional LUT values (background concentrations) and the toxic and carcinogenic chemicals that exceed RBSLs (see Appendix D, Table D-4 for a listing of these chemicals) would be removed, making the site safe for use as open space, the planned end use by the land owner, Boeing. Only low concentrations of chemicals and background concentrations of radionuclides would remain. This alternative would leave on site an additional 691,000 cubic yards of soil (compared to the Cleanup to AOC LUT Values Alternative) with low concentrations of chemicals, or about 88 percent of the 1,616,000 cubic yards of soil exceeding the AOC LUT values. This alternative would maintain the point-by-point cleanup comparison for chemicals and radiological constituents as stated in the 2010 AOC. The exemption process for protection of biological and cultural resources would remain the same as described for the Cleanup to AOC LUT Values Alternative.

Conservation of Natural Resources Alternative

This alternative, with its Residential and Open Space Scenarios, is based on the soil cleanup methodology normally applied by DTSC throughout California, including that for Boeing's proposed soil cleanup at SSFL. The alternative is based on the Standardized Risk Assessment Methodology approved by DTSC for use at SSFL, but using more-recent guidance and updated parameters from EPA. DOE included this alternative as a reasonable approach to site remediation comparable to that used at other DOE sites and sites being addressed by EPA under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and to answer questions posed by the community on what a typical risk-based cleanup project would entail. It provides a basis of comparison with the Cleanup to AOC LUT Values Alternative, but it is not based on most of the AOC criteria, e.g., the LUT values and the point-by-point application of the LUT cleanup values. The exemption process for protection of biological and cultural resources would remain the same as described for the Cleanup to AOC LUT Values Alternative. The Residential Scenario of this alternative would leave on site an additional 138,000 cubic yards of soil and the Open Space Scenario would leave an additional 151,800 cubic yards of soil (compared to the Cleanup to Revised LUT Values Alternative) with low concentrations of chemicals and

radionuclides. About 97 percent of the 1,616,000 cubic yards of soil exceeding the AOC LUT values would not be removed under these two scenarios.

2.3 Suitable Backfill Soil

Comment Summary

Several commenters echoed DOE's concern that it may not be possible to locate and acquire adequate volumes of backfill soil that can meet the AOC LUT values. These commenters cited concerns about constituent concentrations above AOC LUT values; the physical, chemical, and biological makeup of the backfill soils being different from the soils they would be replacing; and the backfill soils not supporting SSFL native vegetation.

Other commenters believed that suitable backfill is available. These commenters cited the Gillibrand soils that meet all but two of the AOC LUT values, believing that DTSC would accept the Gillibrand soils as suitable backfill. Some commenters believed that DOE needs to look harder to find suitable backfill.

Some commenters were concerned that DOE underestimated the quantity of backfill materials needed and that this would result in changes in topography at SSFL that would affect the visual character of the site, surface hydrology, and natural vegetation and biota. Other commenters were concerned that DOE overestimated the amount of backfill needed and that DOE could produce acceptable changes in topography by recontouring portions of SSFL.

A few commenters believed that overburden and other materials excavated for other purposes could be used as backfill. Some commenters stated that gravel or other non-soils would not be suitable backfill materials.

Finally, some commenters recommended that the impacts on the offsite areas from which backfill would be taken should be addressed in this EIS.

Response

DOE used soil samples taken during soil investigation processes to determine where and at what depth soil exhibited chemicals and/or radionuclides above LUT values. In several locations in Area IV, the depth of soil exceeding an LUT value was greater than 15 feet below ground surface. Following soil removal, DOE would need to replace excavated soil to the approximate prior ground surface contours. DOE determined that there would not be a need for a one-to-one soil replacement, but estimates that about 75 percent of the volume of soil removed would be required to restore the landscape. In addition, there is no overburden soil because surface soil generally exceeds LUT values. DOE recognizes that the backfill soil volume presented in the EIS is a "planning estimate" developed for purposes of impact analysis and that the volume will most likely be revised as soil remediation engineering plans are refined. However, DOE believes that the backfill volume is an appropriate estimate for purposes of this EIS.

Regarding backfill, the 2010 AOC states that backfill soil "must not exceed local background levels." The AOC further states that backfill soils must achieve "all Look-Up Table values." DOE interprets the AOC language to mean that all constituents in the backfill soil must meet the LUT values. Otherwise, DOE would be removing soil to LUT values and then replacing the soil with constituents that exceed those values.

DOE does not own any land at SSFL and, therefore, cannot develop an onsite soil backfill borrow area without Boeing's permission. DOE tested three potential backfill borrow sources, two local

offsite commercial soil backfill borrow sources and a source of dredged soil³ and found the samples to exceed three AOC LUT values for chemicals at one commercial source and nine at the other (see Appendix D). Because the replacement soil would likely require incorporation of soil amendments (fertilizers and organic matter) to support effective restoration and plant growth, DOE also tested commercial soil products for LUT chemicals. The soil products contained between 11 and 24 chemicals exceeding LUT values. Finally, the soil background study area sampled by DTSC also exceeds some of the LUT values, thus, it could not be used as a backfill source. For these reasons, DOE concluded that finding backfill soil meeting the AOC LUT values would be problematic.

DOE shares commenters' concerns about the quality of backfill needed so that the site can be restored and support the plant and animal communities currently thriving at the site. Therefore, candidate soils must not only comply with established criteria (be less than the AOC LUT values per the 2010 AOC), but must also have physical and chemical characteristics similar to those of the soil removed. NASA has also tested materials from multiple offsite backfill locations in the region and found material that NASA believes meets the AOC LUT values. However, NASA notes that these materials are predominantly a sand-and-gravel mixture with no materials capable of restoring excavated areas at SSFL to pre-cleanup conditions (NASA 2017a). A sand and gravel mixture is not soil and, therefore, would most likely not support regrowth of native vegetation, and would require the use of soil amendments to support revegetation efforts. As indicated above, DOE tested soil amendments and found that the tested samples exceeded LUT values.

Per the 2010 AOC, Attachment C section on Backfill/Replacement Soils Confirmation Protocol, "If an onsite or offsite source of backfill soils that achieves all Look-Up Table values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill." Consistent with this provision, DOE sent a letter to DTSC in December 2016 identifying the difficulty of finding suitable backfill soil and met with DTSC on July 26, 2017 to discuss the issue. DTSC's is in the process of developing a response regarding finding AOC suitable backfill soil. DOE expects additional meetings with DTSC to discuss this issue.

Because no source for backfill has been identified at this time, the need to evaluate impacts at source locations has not been determined. After DOE and DTSC agree on a location (or multiple locations) for backfill material, DOE will evaluate whether additional NEPA analysis will be required.

2.4 Application of Exemptions under the 2010 Administrative Order on Consent

Comment Summary

Commenters indicated that DOE does not have the authority to delineate exemption areas under the 2010 AOC and were concerned that DOE was using the AOC exemption process as a way to avoid the expense and effort of cleanup. They indicated that exemption areas identified in the Draft EIS were larger than justified by conditions in the AOC, had not been approved by DTSC, and that other conditions set forth in the AOC concerning exemption areas had not been satisfied. Some commenters were concerned that the exemption areas would pose a risk to public health because DOE would not remove contamination from these areas.

Commenters were concerned that the proposed exemption areas as drawn appeared to incorporate clearly disturbed and contaminated areas, including concrete pads, for example, and that these need

³ This third source, recovered lake sediment from dredging, was evaluated and found to have 11 samples that exceeded AOC LUT values for chemicals.

to be cleaned up and not protected as part of an exemption. Commenters stated that there has been an “exemption area overreach” and/or “gross misrepresentation of the actual areas that qualify for exemption.” In other words, too many areas have been classified as exemption areas, including disturbed (concrete pads, power grid) and contaminated (radionuclide concentrations greater than the AOC LUT values) areas.

Commenters noted that the USFWS issued a “no jeopardy” Biological Opinion in response to the EPA’s proposal to conduct an Area IV-wide gamma-scan survey for radiological contaminants and inferred that this “no jeopardy” opinion indicates that there would be “no jeopardy” as a result of DOE’s cleanup of Area IV and the NBZ. Commenters asserted that current biological exemption areas are contrary to a 2010 USFWS Biological Opinion that stated there were no unavoidable or inmitigable negative biological impacts at SSFL. Others stated that the referenced Biological Opinion was issued too long ago to be valid.

Commenters asserted that cleaning up the radioactive and toxic damage to the SSFL environment would help biological features in the long run, not harm them.

Commenters noted that DOE must consult with Federal and State wildlife agencies to define the biological exemption areas. A formal assessment of the suggested protected habitat is needed and final input, and opinions from both the USFWS and CDFW are required.

Commenters suggested that there are no formally recognized Native American artifacts and, therefore, no basis for proposing exemption of a vast amount of the contamination from cleanup because of isolated small artifacts, as DOE has done, because such artifacts can be fully protected while also allowing the site to be returned to its natural state. The results of previous cultural resources surveys, the quality of reports, and determinations of National Register of Historic Places (NRHP) eligibility were topics of interest to some. In addition, some commenters have stated that cultural resources should not be considered eligible unless there is a formal concurrence with the State Historic Preservation Office (SHPO). Commenters were concerned with the definition of cultural resources as stated in the AOC in contrast to other laws and regulations and how the definition of cultural resources related to impact analysis, including the differences between NEPA and the NHPA. Commenters requested that DOE comply with the applicable environmental laws and regulations governing cultural resources, including the requirements of NEPA and NHPA to consult with Native Americans.

Response

In planning and executing the cleanup of SSFL Area IV and the NBZ, DOE is required to comply with NEPA, the Endangered Species Act (ESA), and NHPA. The areas within which the exemption process would be applied (called exemption areas in the Draft EIS) contemplated by DOE are consistent with requirements to protect biological and cultural resources in accordance with the ESA and NHPA and are being coordinated with the appropriate regulatory agencies. The 2010 AOC (DTSC 2010) also acknowledges the need to comply with other external requirements in Section 7.11, “Compliance with Applicable Laws and Regulations,” which states that “actions taken pursuant to the order by DOE will be undertaken in accordance with applicable local, State, and Federal laws and regulations.”

DOE notes that the process developed for application of the exemptions was undertaken to comply with Federal and State law, and not to avoid cleanup. Cleanup would involve removal of soil contaminated above risk-based levels regardless of the presence of sensitive biological and/or cultural resources.

In the Draft EIS, the exemption areas were identified as “proposed AOC exemption areas” and in the Final EIS are referred to as areas within which the exemption process would be applied or areas

subject to the exemption process. Areas within which the exemption process would be applied as described in this EIS were identified based on DOE's extensive investigation of the location of sensitive biological and cultural resources and early and ongoing interactions with USFWS, CDFW, DTSC, SHPO and others. Some of the areas subject to the exemption process include formerly disturbed and potentially contaminated sites within their boundaries. This is typically because, over much of the northern and eastern parts of the site, sandstone outcrops supporting populations of State-listed Santa Susana tarplant frequently lie in very close proximity to intervening areas that were developed and may be contaminated, and it is impractical to separate these areas completely on the small-scale maps included in the EIS for planning purposes.

In this Final EIS, DOE's approach to remediation is to designate areas within which the exemption process would be applied. These include areas identified for protection of Federally-listed species and critical habitat, as well as areas identified consistent with state and local laws, regulations, and ordinances, plus areas identified for protection of cultural resources. These areas would then be investigated in detail prior to cleanup so that areas posing a risk to human health and/or the environment can be identified for careful cleanup using risk-assessment-based cleanup levels established to protect human health or the environment. These areas subject to the exemption process include the protected resource and a buffer area (for cultural resources) to provide additional protection against inadvertent disturbance of the protected resource. In its soil remediation plan(s), DOE would include implementation of the protections required by the USFWS in its biological opinion and would propose cleaning up soil in other areas in which the exemption process would be applied to avoid damage to other biological resources protected under state and local laws and to protect cultural resources.⁴ By this process, areas supporting endangered, threatened, or rare species or cultural resources and not posing an appreciable risk to human health and the environment can be avoided. There would be fewer impacts on biological and cultural resources within areas within which the exemption process would be applied because remediation within these areas would occur via focused removal actions that would minimize soil and habitat disturbance.

As indicated in Chapter 2, Section 2.3.2 of this EIS, of the 222 acres containing chemical or radioactive constituents exceeding AOC LUT values, 77 acres would be subject to the exemption process. Of the 77 acres subject to the exemption process it is estimated that 4 acres would require remediation by removal of soils because they exceed risk-based levels established to protect human health or the environment. Under all of the soil remediation action alternatives, those 4 acres would be subject to focused removal actions that would minimize disturbance of adjoining soils. The degree of disturbance caused by removal actions within areas subject to the exemption process would vary from one such area to another, depending on the nature and extent of the removal actions required. The areas within which the exemption process would be applied and soil that may be removed, will be determined based on the results of consultations with USFWS, CDFW, DTSC, SHPO, Native Americans with interest in SSFL cultural resources, and others and ultimately will be approved by DTSC as it approves the soil remediation plans for cleanup of Area IV and the NBZ. The soil remediation plans will include detailed plans for cleanup including the identification of cleanup methodologies to be used in areas subject to the exemption process.

DOE worked closely with DTSC staff and personnel from the USFWS and CDFW to develop a process for the application of AOC exemptions for the protection of biological resources. The process was refined during several meetings attended by DTSC staff and proposed to both wildlife agencies. These meetings began in June 2013 (see Appendix E, Table E-4 of this EIS). The wildlife

⁴ DOE will implement an NHPA Section 106 Programmatic Agreement to address historic properties. The Programmatic Agreement will have provisions for addressing inadvertent discoveries. DOE is also working with Native Americans to develop and implement a process for addressing other cultural resources that do not fall within the purview of NHPA.

agencies indicated their concurrence with the process in a CDFW letter dated December 8, 2016 (CDFW 2016), and a USFWS letter dated February 2, 2017 (USFWS 2017).

As described in the Chapter 2, Section 2.3.2 of this EIS, the process of identifying the areas subject to the exemption process and cleanup within these areas is as follows: The areas subject to the exemption process for biological resources were identified through consultation with USFWS and CDFW and others as part of consultation under the Federal Endangered Species Act (ESA) and California Endangered Species Act (CESA). The USFWS Biological Opinion (BO) resulting from this consultation is included as Appendix J of this Final EIS. The areas subject to the exemption process include areas identified in the BO for protection under the ESA, as well as areas identified by DOE for protecting sensitive species and sensitive habitat consistent with state laws and regulations and local ordinances. Cleanup in these areas will be described in the soil remediation plans to reflect the USFWS BO and to address state and local requirements for species and habitat protection. The soil remediation plans are subject to approval by DTSC. As needed and appropriate, DOE would pursue State or local authorizations to “take” State-protected species and/or disturb sensitive habitats.

The previous “no-jeopardy” Biological Opinion issued by USFWS on EPA’s proposed radiological sampling in Area IV (USFWS 2010) was not an indication that ESA consultation on the cleanup of Area IV and the NBZ was not necessary. This is for several reasons, including the nature of the action and changes in the state of knowledge.

- *Nature of the action:* The EPA project involved mowing or trimming vegetation followed by going over the site with radiation scanning equipment and taking soil samples at specific points. Generally, the mowing and trimming left root systems of plants and the soil profile intact with minor surface disturbance caused by foot traffic and the off-road gamma scanning equipment. After the EPA project, vegetation in most areas was able to resprout from the root systems or germinate from seeds in the soil seed bank and the habitat recovered relatively rapidly. In contrast, the DOE cleanup actions would remove vegetation and soil over a large area of the site. For the cleanup of Area IV, acceptable soil for backfill similar to that on site and meeting AOC LUT standards must be located and transported and the topography of the site recontoured. Vegetation would have to be re-established using transplants and seeds of native species, a very laborious process with uncertain results that could take decades.
- *Changes in the state of knowledge.* Prior to the EPA gamma scan study, there had been a high level of public concern over the possibility that radiological contamination was widespread and severe at Area IV, given the site’s history. We now know, based on the Area IV-wide EPA gamma scan and intensive soil sampling and analysis, that potential areas of radiological contamination are localized at a few sites that historically focused on using radiological materials. EPA reported that approximately “70 percent of soil samples with radionuclide concentrations greater than the FAL [field action levels] are located within five Area IV Radiological Areas of Interest: RMHF complex, Sodium Reactor Experiment (SRE) complex, 17th Street drainage, Former Fuel Element Storage Facility, and New Conservation Yard Drainage Area” (HGL 2012b). Thus, there is no widespread radiological contamination in Area IV or the NBZ.

Impacts associated with DOE’s cleanup actions would be more severe than those resulting from the EPA soil sampling project. Based on this fact coupled with information regarding the concentrations of chemical and radiological constituents and their locations (e.g., localized pattern of radiological contamination), the biological assessment and consultation related to DOE’s proposed cleanup of Area IV and the NBZ resulted in a different set of controls for protecting biological

resources (i.e., the identification of areas in which the exemption process would be applied and the USFWS Biological Opinion [see Appendix J]).

As stated in Chapter 4, Section 4.5.1.2.3 of this EIS, Section 7 consultation with USFWS under the Federal ESA and consultation with CDFW under the California ESA was conducted. Informal consultation between DOE, USFWS, and CDFW had been ongoing since 2009 in face-to-face meetings and telephone conferences, most attended by DTSC staff. After issuance of the Draft EIS, DOE conducted additional analysis of potential impacts on sensitive species and habitats, prepared a biological assessment addressing the requirements of ESA Section 7 and submitted it to USFWS and CDFW in support of the consultation, and received a Biological Opinion from USFWS (see Appendix E, Consultations, in this Final EIS for additional detail on this consultation). Implementing the impact avoidance, minimization, and species conservation measures summarized in this EIS and identified through the consultations would further reduce impacts on sensitive species.

Although cleanup of toxic and radiological materials followed by restoration and revegetation would, in the long run, help biological features at severely disturbed areas such as parking lots and building foundations, these areas do not represent the majority of Area IV and the NBZ. The opposite is true in areas supporting native or naturalized plant and animal communities. The latter conditions exist on the majority of Area IV and the NBZ, except areas that were subject to industrial development and use. Cleanup of sites supporting native or naturalized plant and animal communities would result in an adverse impact to these areas due to the profound disturbance to vegetation and soils caused by the removal of vegetation and soils. Additionally, as described in this EIS, there are uncertainties surrounding the ability to secure appropriate topsoil for backfilling the remediated areas and to restore soils and vegetation after it has been removed. At best, restoration and revegetation after remediation would be a resource-intensive and time-consuming process. The impacts of remediation on biota and the difficulties and uncertainties associated with restoration after such profound soil disturbance are detailed in Chapter 2, (Table 2–8) and under each of the Soil Cleanup Alternatives (e.g., Chapter 4, Table 4–25, Sections 4.5.1.1 and 4.5.1.2) of this EIS.

As stated in Chapter 4, Section 4.5.1.2.1 of this EIS, management measures, including conducting pre-construction surveys, identifying impact-minimizing access routes, deploying biological monitors during work activities, avoiding nesting season for migratory birds or incorporating adequate setbacks, and implementing soil stabilization and restoration techniques would help to further minimize impacts in all areas, including the areas in which the exemption process would be applied. DOE would take action in these areas in compliance with conditions in the Biological Opinion to remove soil with chemical or radionuclide levels that pose a risk to human health or the environment. As needed, DOE would pursue DTSC approval for other exemptions consistent with the 2010 AOC, i.e., to comply with State and local laws and regulations (e.g., to avoid removal of oak trees) or to address unforeseen circumstances (prevent environmental damage and avoid unsafe work environments in remote locations). Final areas subject to the exemption process will be identified in the individual soil remediation plans, which are subject to DTSC approval.

DOE's recommendations for areas in which the exemption process would be applied to protect cultural resources were determined through consultation with the SHPO, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes.

The definition of cultural resources is an important basis for NEPA impact analysis and the determination of exemptions as allowed in the 2010 AOC. The 2010 AOC exemption for cultural resources employs the phrase "Native American artifacts that are formally recognized as Cultural Resources," but it does not elaborate further as to the meaning of that terminology. To comply with the AOC, and also with NEPA and NHPA, the EIS defines in detail the types of cultural resources

considered (see Chapter 3, Section 3.11.1, including the text box titled “Types of Cultural Resources”). These definitions are inclusive of the AOC’s broad terminology.⁵

Cultural resources in Area IV and the NBZ have been identified through decades of surveys and research at SSFL, resulting in an intensive inventory of these areas. DOE considered the results of this research with the intention of identifying cultural resources that may be impacted by the cleanup efforts (see Chapter 3, Section 3.11.2.3, and Appendix F, Section F.2 of this EIS). In addition to surveys, DOE conducted Extended Phase 1 testing (sub-surface testing to determine the presence/absence of cultural resources) following a process developed in consultation with the Santa Ynez Band of Chumash Indians, non-federally recognized tribes, and SHPO (see Appendix F, Section F.2.3 of this EIS). Based on this evaluation program DOE determined that 8 of the 10 archaeological sites were individually eligible for inclusion on the NRHP and 2 sites were individually ineligible for listing on the NRHP. The Extended Phase I report has been filed with the SHPO and reviewed by the Santa Ynez Band of Chumash Indians and non-federally recognized tribes. Efforts are currently on-going to further define the relationship of archaeological resources at the SSFL. NASA is developing a proposal for an NRHP-eligible Burro Flats Archaeological District to the California SHPO that includes several archaeological sites in Area IV, and DTSC discussed the NRHP-eligibility of an SSFL-wide archaeological district, the Simi Hills Archaeological District, in its Draft Program EIR (DTSC 2017b). Therefore, some of the archaeological sites in Area IV and the NBZ could be included in or identified as contributing elements to archaeological districts that are currently under consideration for NRHP eligibility.

Although at this time, no archaeological sites in Area IV or the NBZ have been listed on the NRHP, DOE, as the Federal agency responsible for complying with Section 106 of the NHPA, considers some of these sites to be eligible for listing on the NRHP, which confers the same status as actual listing on the NRHP (36 CFR 800.16(l) (2)). Determinations of eligibility are based on data collected during archaeological surveys and through laboratory analyses of artifacts or other evidence. These analyses were conducted by archaeological professionals (defined as meeting the Secretary of the Interior’s Professional Qualifications Standards for Archeology and Historic Preservation (36 CFR 61)).

As described in Section 3.11.2.3.4, the Santa Ynez Band of Chumash Indians, a federally recognized tribe, has identified the entire SSFL as a Native American sacred site, and also notified DOE of its identification of a portion of SSFL as an Indian sacred site for consideration consistent with Executive Order 13007, *Indian Sacred Sites*. There have been additional efforts by NASA, the Santa Ynez Band of Chumash Indians, non-federally recognized tribes, and others related to documenting SSFL’s special significance to Native Americans. These efforts may result in the designation of one or more NRHP-eligible traditional cultural properties. DOE and Native Americans with ties to SSFL prefer avoiding disturbance at archaeological sites and disturbance to unknown sites if there is no threat to human health or ecological resources. DOE considered these possibilities when analyzing impacts from cleanup activities (see Chapter 4, Section 4.11 of the EIS, under each alternative, and summarized in Section 4.11.4). Proposed methods to mitigate impacts and resolve adverse effects through avoiding, minimizing, or mitigating them are described in Chapter 6, Sections 6.1 and 6.2. DOE determined that cultural resources exemptions allowed by the 2010 AOC would result in recommended exclusion zones (protective buffers) around cultural resources that are listed on or eligible for listing on the NRHP (i.e., historic properties) (see Chapter 4, Section 4.11). Exclusion zones would provide a buffer around the cultural resources within the area in which the exemption process would be applied and only those soils with contaminant concentrations that pose a risk to human health or the environment would be removed. The

⁵ Types of Cultural Resources include: Archaeological resources, Architectural or structural resources, Historic properties, Traditional cultural properties, Traditional cultural resources, Sacred sites, and Cultural landscapes.

process for identifying these areas will be included in the NHPA Section 106 Programmatic Agreement being developed in consultation with the SHPO and other consulting parties, including the federally-recognized Santa Ynez Band of Chumash Indians and other Native Americans with interests or ties to SSFL, and DTSC.

DOE has diligently conducted consultation during the NEPA process, as demonstrated by its extensive program of meetings and other communications with consulting parties (please refer to Chapter 4, Section 4.11.4, and Appendix E, Consultations), that will result in the creation of an NHPA Section 106 Programmatic Agreement. This legally binding agreement, being developed in consultation with DOE, the SHPO, the federally recognized Santa Ynez Band of Chumash Indians, non-federally recognized tribes, and other consulting parties, will establish a framework for addressing NRHP-eligible historic properties during implementation of the cleanup program, including measures to be taken to avoid, minimize, and mitigate impacts on historic properties during cleanup. For example, the Programmatic Agreement will specify the need for Native American monitoring during ground-disturbing activities to aid in identification of any cultural resources unearthed as a result of cleanup. A process for determining specific mitigations will be set forth in the Programmatic Agreement, which also will include procedures for inadvertent discovery of archeological deposits, human remains, and funerary/sacred objects. Additional mitigations, if required, would not be deferred, but could occur during cleanup. The Programmatic Agreement will be subject to a public review prior to being signed. Under its NEPA responsibilities, DOE also will work with the Native Americans to establish processes to appropriately address cultural resources that are not eligible for the NRHP.

The identification of proposed areas in which the exemption process would be applied as defined for cultural resources was based on previous research and extensive consultation. The locations will be finalized through completion and implementation of the NHPA Section 106 Programmatic Agreement (for resources eligible for the NRHP) and continued consultation regarding all cultural resources. Final areas in which the exemption process would be applied will be identified in the individual soil remediation plans, which are subject to DTSC approval.

2.5 Toxicity of Soil Contaminants

Comment Summary

Comments were received stating that any soil containing any chemical exceeding its LUT value would be toxic (i.e., manifest health effects following exposure) to people and wildlife, irrespective of concentrations and the manner under which exposure to the chemicals could occur. Some commenters have argued that allowing soil with low concentrations of chemical and/or radiological constituents to remain on site might be the more responsible approach. There were also comments received that compared the presence of chemicals in soil with concentrations of chemicals in products, industrial use, and laboratory studies of animals.

Response

The 2010 AOC did not dictate a volume of soil that was necessary to be cleaned up to be protective. In establishing the AOC LUTs, DTSC and EPA collected samples from a number of locations unaffected by site operations with soil and subsurface soil overlying the same geologic formations that are present at SSFL. The soil samples were sent to laboratories for testing chemical and radiological constituents. The AOC LUT values for each chemical and radiological constituent were established at background or the lowest concentration that the laboratory was able to determine. This approach was premised on an assumption that any concentration over the minimum level that a laboratory could “see” was caused by human activity associated with SSFL operations. It should be noted that the background sites were chosen by DTSC and EPA because there was no

mechanism for DOE's SSFL activities to have caused higher concentrations at these locations. DTSC's presumption in establishing the LUT values at the lowest possible level implies an assumption that any concentration of any constituent found in Area IV or the NBZ above a minimum detectable level found at a background site was caused by DOE's activities and therefore must be cleaned.

DOE believes that the AOC LUT values might be interpreted to imply an assumption that any detectable amount of any of those constituents could cause harm to humans or ecological receptors. However, for many of the constituents, LUT values were set below levels that have been demonstrated as not being harmful to humans or ecological receptors, that is below the RBSLs for the receptors being considered in this EIS (resident [no garden], recreational user, and ecological) (see Appendix D of the EIS for a comparison). Most substances known to man have levels at which they are safe for humans and levels at which exposure is harmful. EPA has established risk assessment processes that require removal of constituents posing risks to humans. The DTSC has established conservative AOC LUT values for SSFL, which may give the perception that exposure to concentrations greater than LUT values will cause human health or ecological harm (an approach which is not supported by public health professionals or epidemiologists). This use of background/detection level quantities for AOC LUT values is inconsistent with the approach taken at other DOE sites, other DTSC sites, and other sites being cleaned up by the EPA around the nation. This position is not consistent with the risk-based screening criteria developed by EPA for CERCLA sites.

Consider the fact that at the locations from which background soil samples were taken 42 percent of the chemicals exceeded AOC LUT values in at least one sample and would require cleanup (see Appendix D of this Final EIS). All of the locations from which background samples were taken had elevated concentrations of at least one constituent despite the fact that the background sites were chosen by DTSC and EPA because they were deemed to be "pristine," that is unaffected by operations at SSFL.

The soil being left behind under the each of the cleanup alternatives is not contaminated at levels requiring remediation because it poses a risk to humans as implied by commenters. In assessing the health impacts of the soil left onsite after remediation, the volume of soil remaining is not the most relevant number; rather, the volume of soil remaining that contains contaminants in concentrations that pose a risk to human health or the environment is much more relevant. The action alternatives other than the Cleanup to AOC LUT Values Alternative were designed to address soil concentrations that pose a risk using standard EPA risk assessment procedures. These alternatives were evaluated to allow the public and the decision-maker to compare the impacts associated with different sets of assumptions about how levels targeted for cleanup affect the overall magnitude of the cleanup program.

For a chemical in the environment to be toxic, several conditions must exist. First, a person or animal must come into direct contact with the chemical, resulting in an exposure. Exposure can either be via ingestion, inhalation, or absorption through the skin. The physical state of the chemical (i.e., solid, liquid, or gaseous) is important. At SSFL, chemicals are generally strongly adsorbed to soil particles and, thus, are considered solids. They generally do not exist in a liquid (or product) state; therefore, skin adsorption is not a primary exposure route of concern. The chemicals generally do not exist in a gaseous state, so direct inhalation is not a primary exposure route of concern. Therefore, ingestion of contaminated soil and inhalation of contaminated dust are the two exposure pathways of concern.

Ingestion of soil containing chemicals can occur only after an individual or animal comes in direct contact with the soil (it must be touched) and the soil is put into the mouth (e.g., hand-to-mouth

contact). If dust is produced, inhalation becomes a pathway for exposure. The act of walking across soil does not necessarily result in an exposure.

Another important consideration for toxicity is the concentration of the chemical in the soil. Toxicologists from multiple universities and EPA scientists have spent years evaluating the concentrations at which chemicals manifest effects of toxicity. The results of the studies have been used to establish concentrations that scientists deem to be safe based on ingestion, inhalation, and skin exposure. For SSFL, concentrations of chemicals in soil above which there would be a health concern, termed RBSLs, have been established for all chemicals of concern for different exposure scenarios (MWH 2014). The RBSLs provide a basis with which to compare soil concentrations to determine whether the soil could be toxic under a specific exposure scenario. A review of the soil chemical data for Area IV shows that approximately 90 percent of the soil sample test results had chemical concentrations below RBSLs determined for a suburban resident without a garden exposure scenario. Therefore, exceeding an AOC LUT value, but not an RBSL value, does not mean that an observed chemical is present at a toxic concentration. **Table 2–1** illustrates the percentage of soil samples that exceeded the suburban residential RBSL for the most frequently observed chemicals reported to be above the AOC LUT values.

Table 2–1 Percentage of Soil Samples Exceeding the 2010 AOC Look-Up Table Values and Suburban Residential Risk-Based Screening Levels

<i>Chemical</i>	<i>Percentage Above LUT</i>	<i>Percentage Above RBSL</i>	<i>Chemical</i>	<i>Percentage Above LUT</i>	<i>Percentage Above RBSL</i>
Antimony	3.65	0.12	PCB-1254	9.34	1.22
Cadmium	5.08	0.22	PCB-1260	6.02	0.54
Mercury	5.06	0.17	PCB-5460	2.71	0.6
Selenium	3.92	0.0	Dioxins	33.3	10.4
Silver	6.85	0.07	Benzo(a)pyrene	18.8	6.41
Zinc	2.2	0.0	Dieldrin	5.22	0.21

LUTs = Look-Up Table; PCB = polychlorinated biphenyl; RBSL = risk-based screening level

The removal of soil that exceeded the chemical RBSLs, as is proposed under the Cleanup to Revised LUT Values Alternative, would mean that 100 percent of the remaining soil would contain chemical constituents at concentrations less than the risk-based standards, thus making Area IV safe for the land owners designated future use of open space.

Comments that compare concentrations of chemicals in soil to industrial protection standards and concentrations in products and laboratory animal foods contribute to public misperception of the hazards associated with exposure to chemicals. Industrial settings use chemicals in high concentrations and afford a much greater exposure potential for skin absorption and inhalation pathways. In such a setting, identifying a chemical as having an “immediately dangerous to life or health (IDLH)” concentration is appropriate. Worker safety standards developed for the industrial environment reflect exposures to chemical products and industrial process dusts. It would be inappropriate to use IDLH concentrations for a chemical in the soil at SSFL. There is no direct comparison to chemicals in soil generally due to the much lower concentrations in soil and the fact that at SSFL chemicals are adsorbed to soil particles and not present as process dusts. Consequently chemicals at SSFL are not as readily available for exposure via skin contact and inhalation (even though inhalation is one of the primary pathways for exposure to contaminants at SSFL). Similarly, chemicals in animal feeds are at much higher concentrations than those observed in SSFL soil and are intended for direct assessment of chemical toxicity in laboratory animals. Comparable exposure conditions do not exist for chemicals associated with SSFL soils due to their comparatively low concentrations.

2.6 Comparison of Radiation Doses

Comment Summary

A number of commenters objected to the use of the 25 millirem per year dose as the upper limit identified for establishing cleanup levels under the Conservation of Natural Resources Alternative, as well as for making decisions on disposal of low-level radioactive waste. Some commenters noted that use of this dose limit violates the 1995 DOE-EPA Joint Policy that all DOE sites must be cleaned up consistent with EPA Superfund guidance, noting that EPA has declared 25 millirem per year to be nonprotective.

Response

In this Final EIS, DOE used chemical risk, radiological risk (not dose), and chemical toxicity hazard to establish the levels of cleanup under the Conservation of Natural Resources Alternative (both scenarios). DOE chose to identify cleanup to a 25 millirem per year dose in the discussion of the Conservation of Natural Resources Alternative because that is the upper limit of the range of acceptable doses based on release criteria under DOE requirements (DOE Order 458.1). As stated in the Draft EIS, as-low-as-reasonably-achievable (ALARA) considerations are also required to limit the dose further for any specific application. The limit is part of DOE's radiation protection system which follows the principles of and is fully consistent with the recommendations of the National Council on Radiation Protection and Measurement (NCRP) and the International Commission on Radiological Protection (ICRP). In addition, DOE's 25 millirem per year limit is consistent with Nuclear Regulatory Commission regulations in 10 CFR Part 20, Subpart E, Radiological Criteria for License Termination. DOE's requirements and protection system are protective of the public and environment. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

Under the CERCLA, EPA uses a lifetime risk range to guide cleanup decisions. EPA considers a range of risks between 10^{-6} and 10^{-4} to be the acceptable range of risk for most cleanups to be protective. The specific reference to EPA's statement that 25 millirem per year is not protective (EPA 1997) is based on a worst case assumption that an individual is exposed to 25 millirem per year for a life-time. This is rarely the case in real life or for most radionuclides at DOE sites. In many cases, establishing a maximum cleanup concentration based on an annual dose limit based on 25 millirem in a year results in cleanups that result in risk estimates well within or below the CERCLA risk range. Conversely, cleanups designed to meet the lifetime risk goals can actually exceed the annual radiation dose limit of 25 millirem in a year when the radionuclides' half-lives are short. Doses from these short half-lived radionuclides declines rapidly with time and the doses in later years do not contribute as significantly as the doses in early years to a lifetime exposure.

DOE, NRC, and most other agencies regulating radionuclides base their standards on annual dose limits rather than lifetime risk limits. There are several reasons for this; two important ones are:

- 1) Radiation cleanup standards use annual dose for consistency with worker protection limits and release limits for public protection (including those for waste management), which are based on annual dose limits, and
- 2) DOE uses annual dose limits because of the greater uncertainty associated with lifetime risk estimates.

DOE and others regulate radiation based on an assumption that risks are linear with those associated with high doses and dose rates, and without a threshold. The fact is that at lower doses,

below about 10 rem (10,000 millirem), there has been no epidemiological evidence of increased radiation risks. So the risk may or may not exist. However, if the scenarios assumed in the dose analyses occur, the calculated doses will occur. For comparison, the average per capita dose to a person in the United States is approximately 620 millirem per year, with an average of 320 millirem coming from natural background sources (311 millirem) and from occupational, industrial, and consumer sources. The remaining 300 millirem is the result of average medical exposures over the entire U.S. population. The average dose from medical exposures includes those who had no medical procedures so that the average for the subset receiving medical exposures is much higher.

In any case, the 25 millirem in a year exposure limit represents a maximum possible dose. It does not take into account DOE's requirement to apply ALARA to the decision. Results of the risk assessments performed for this Final EIS indicate that cleanup of chemicals and radionuclides in those areas with the highest concentrations result in radiological risks of 5×10^{-5} or less, consistent with the CERCLA risk range (see Appendix K).

2.7 Offsite Impacts

Comment Summary

A wide variety of comments were received that discussed offsite health impacts due to releases and migration of contamination from the SSFL site.

Some commenters were concerned about contamination already present off site that they attributed to past SSFL operations. Some commenters were concerned that erosion, rain, wind, and recent brush fires have already contaminated and continue to contaminate offsite locations that are downwind, downstream, and downhill. Many were concerned about exceedances of National Pollutant Discharge Elimination System (NPDES) surface water discharge limits. Some were concerned about contaminated surface water discharges that could leave the site during heavy rain periods. Others were concerned about groundwater contamination plumes extending off site. Specifically, some were concerned about elevated radionuclide and chemical concentrations found on the Brandeis Bardin property.

Other commenters were concerned about contamination that would be released off site during remediation activities via windblown dust, surface water runoff, and truck transportation. Some commenters expressed a belief that such impacts are greatest under the Cleanup to AOC LUT Values Alternative, which could generate significantly more dust—over a much greater time horizon—than the other alternatives. These commenters asked for an assessment of the risks to offsite receptors from radionuclides, chemicals, and pathogens present in the dust generated by the remediation alternatives.

Still others were concerned about the long-term migration of contaminants left on site to offsite receptors after remediation is completed. A number of commenters believe that leaving any contamination on site would pose substantial long-term health risks to offsite residents. Therefore, commenters asked for the assessment of offsite impacts on people and other species from the contamination that would remain on site under the various remediation alternatives.

Response

The scope of this *SSFL Area IV EIS* is the cleanup of DOE-administered areas of SSFL, Area IV and the NBZ. DOE and EPA have conducted extensive studies to map the chemicals and radioactivity on SSFL Area IV and the NBZ. Based on extensive sampling (both onsite and offsite) and analysis of surface water, groundwater, and soil, DOE is confident that significant levels of contamination (as discussed below) have not traveled off site. See EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE

jointly with DTSC (CDM Smith 2017), DTSC’s review of chemical and radiological related to the American Jewish University, Brandeis-Bardin Campus (DTSC 2017a), and other studies such as an offsite investigation conducted in 2007 for Boeing, NASA, and DOE (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Based on modeling results, DOE also believes the plumes will not move off site during or after remediation activities (Chapter 3, Section 3.4.3, of this EIS and CDM Smith 2018a) in concentrations that exceed the target risk range of 10^{-6} to 10^{-4} (1 in 10,000 to 1 in 1 million).

Concern about Contamination Already Present Off Site

Surface Water Discharge

DOE has researched historical surface water discharge events. A summary of surface water discharge findings is included in Chapter 3, Section 3.3 of this Final EIS. This summary updates the data presented in the Draft EIS with results from 2014 through the first quarter of 2018, including results during high rain events. Among the outfalls included in the SSFL sitewide NPDES permit, only discharges through seven outfalls (Outfalls 002, 003, 004, 005, 006, 007, and 018) receive surface water runoff from portions of Area IV and are monitored for compliance with the NPDES-permit benchmarks and limits. Outfall 002 is downstream from ponds that collect drainage from multiple areas at SSFL, including Area IV and areas that are not DOE’s responsibility. Other outfalls included in the permit receive discharges from portions of SSFL that are not DOE’s responsibility. The following summarizes the historical results from the NPDES monitoring.

There were multiple exceedances of regulatory limits (for dioxin, cyanide, lead, mercury, copper, nickel, zinc, iron, total suspended solids, chloride, pH, gross beta, and nitrate) in the years immediately following the 2005 Topanga fire. These exceedances have diminished over time, with exceedances only for iron in 2011 and 2012. There were no exceedances at the outfalls in 2013 through 2016 and none for outfalls 003, 004, 005, 006, 007, and 018 in 2017. There was an exceedance for iron and “chronic toxicity” at Outfall 002 in 2017 and an exceedance for iron in 2018. Implementation of water quality control measures (including upgrades of outfall treatment controls), restoration of burned hillslopes, and best management practices (BMPs) contributed to these reductions in regulatory exceedances.

During the first quarter of 2017, SSFL received a large amount of rain. Six rain events exceeded a reporting criterion that is used for the stormwater report; that is, they produced greater than 0.1 inches of rainfall within a 24-hour period and were preceded by at least 72 hours of dry weather. Five of the six rain events produced stormwater discharges at Outfalls⁶ 002, 004, 006, 008, and 018 during the first quarter of 2017. Through the middle of February 2017, SSFL received 16.74 inches of rain for the current rainy season, then on February 17, received 4.6 inches. As summarized in the *First Quarter 2017 NPDES Monitoring Report* (Boeing 2017a), exceedances of daily maximum benchmark limits, daily maximum permit limits, or receiving water limits occurred at Outfall 002, which receives discharges from multiple areas within SSFL, and three other outfalls (001, 009, and 011) not associated with Area IV discharges.

Outfalls 003, 004, 005, 006, 007, and 018, which are associated or contributed to by Area IV stormwater, did not show any exceedances of either daily maximum benchmark limits or daily maximum permit limits from rain events, even though the rain events were considered to be at near-record levels. Exceedances from sources outside Area IV were previously evaluated by Boeing and were judged to have originated from various sources, including natural soil components, rainfall dry

⁶ These rain events also produced stormwater discharges at Outfalls 001, 009, and 011. These three outfalls are not associated with or contributed to by Area IV stormwater.

atmospheric deposition from local and regional sources, and wildfire combustion processes followed by atmospheric deposition. (Boeing 2008c) Boeing believes that the higher concentrations observed in stormwater runoff resulted from mobilization of total suspended solids after high intensity rainfall events.

Monitoring was also conducted at one offsite location, Frontier Park in Arroyo Simi Valley, which does receive water contributions from Area IV. The monitoring showed E. coli concentrations above the single sample maximum receiving water limit and above the geometric mean receiving water limit. Analysis of the cultures showed the bacteria must have originated from nonhuman, natural sources (wildlife) and did not include bacteria originating from human sources at SSFL. Future monitoring will continue evaluation of the surface water discharges against NPDES benchmarks and limits. Exceedance of a benchmark triggers an evaluation of the BMPs implemented at the site. The evaluation may determine that the BMPs require augmentation, upgrading, or replacement. Exceedance of a permit-limit requires corrective actions and further sampling.

Groundwater

DOE has completed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS was updated with information from the draft groundwater remedial investigation report, including information on the magnitude and extent of the existing groundwater contamination plumes in Area IV and the NBZ. The groundwater investigations have identified areas of contaminated groundwater (plumes). The characterization data indicate that, while some of the groundwater plumes extend into the NBZ, none extend off site at concentrations above what is allowed under the Safe Drinking Water Act. Considering the known rate of movement of the groundwater and the low concentrations of radionuclides and chemicals, impacts on offsite members of the public are not expected. Modelling shows that groundwater migration is not expected to reach offsite receptors before natural processes (chemical degradation, radioactive decay, dispersion) reduce contaminant concentrations below levels based on health-based criteria (e.g., levels allowed under the Safe Drinking Water Act). Nevertheless, evaluation of remedial actions for these groundwater plumes is considered in the alternatives evaluated in this Final EIS.

Air Emissions

As described in Chapter 3, Section 3.6 of this Final EIS, DOE currently conducts limited site investigation and maintenance activities in Area IV that produce minor emissions from the use of on- and off-road mobile sources and the occasional generation of fugitive dust. Past emissions from the Radioactive Materials Handling Facility (RMHF) stack were subject to the requirements of Ventura County Air Pollution Control District Permit to Operate, Number 00232. This permit also covered other stationary sources in Areas I and III of SSFL. In May 2007, DOE suspended all decontamination and decommissioning operations in Area IV and placed the entire RMHF into a safe shutdown mode. As a result, no emissions have been released to the atmosphere through the RMHF stack since that time.

Boeing, NASA, and DOE jointly issued the *Offsite Data Evaluation Report, Santa Susana Field Laboratory, Ventura County, California* in December 2007 (MWH 2007). This report evaluated the data collected from 18 field sampling and analysis events within a 15-mile radius of SSFL over the past 60 years. Offsite properties included American Jewish University Brandeis-Bardin Campus, Sage Ranch Park, Black Canyon, Woolsey Canyon, West Hills, Dayton Canyon, Bell Canyon, and Ahmanson Ranch. The media sampled included soil vapor, soil, sediment, groundwater, surface

water, springs and seeps, bedrock, vegetation, municipal water, and debris. Over 4,000 samples representing over 110,000 analyses of chemicals or radionuclides were evaluated.

The offsite results for chemical and radiological data were evaluated for significance based on comparisons to suburban residential (including garden pathway) risk-based or agency-published screening levels and comparison to background levels considered appropriate at the time. The data results were deemed not significant if:

- a) Concentrations were all below the screening levels, or
- b) Concentrations above screening levels were not repeatable, persistent, and/or limited by surrounding data with results less than screening levels and may or may not be related to SSFL operations.

The results of the offsite data evaluation showed the following:

- The offsite sample results for dioxins, polychlorinated biphenyls, perchlorate, TPH, and radionuclides were judged to be not significant based on the definitions above.
- The offsite sample results for metals and PAHs were not significant except in the Northern Drainage above Areas I and II where a DTSC-approved soil and construction and clay pigeon debris removal action was underway by Boeing, including removal of down-drainage sediments.
- Offsite sample results for volatile organic compounds were not significant except for the presence of volatile organic compounds in groundwater and soil vapor in the area northeast of SSFL (north of the main entry gate), which were to continue to be evaluated and are subject to future work.

The DTSC recently performed a review of the radiological and chemical data from investigations conducted at and near the SSFL and the American Jewish University Brandeis-Bardin Campus and published results in a white paper on May 2, 2017 (DTSC 2017a). The data reviewed included historical data collected at Brandeis-Bardin during the Multi-Media Study in 1992 and 1994 under oversight of the EPA. The review also included data collected by Brandeis-Bardin's consultant, Joel Cehn, and the AJU Brandeis-Bardin data collected in 2016 by Tetra Tech. Also reviewed were Area IV radiological characterization data collected by EPA and the site chemical investigation data collected recently by DOE.

The white paper conclusions are as follows:

- While chemicals within the undeveloped portions of the Brandeis-Bardin property bordering SSFL may exceed background or detection limit-based LUT values, levels do not exceed the respective RBSLs. Most of the samples that slightly exceeded the LUT values, likely did so because the analytical methods were not accurate and precise enough to make definitive comparison to an LUT value. Chemical levels within the active Brandeis-Bardin Campus areas are within the range of local background levels.
- Levels of radionuclides at the Brandeis-Bardin property are within the range of local background levels.
- The levels of chemicals and radionuclides at Brandeis-Bardin Campus are safe for human health, as determined using RBSLs derived using State and Federal standards and guidelines.
- The Brandeis-Bardin Campus is safe for use by campers, visitors, students, and staff.
- Contamination at SSFL does not pose a health threat to users of Brandeis-Bardin Institute or other offsite areas.

- Any credible data demonstrating a threat to human health at Brandeis-Bardin or any other areas from SSFL would result in DTSC taking immediate actions to stop that threat.

It should be noted that the white paper points out that most of the detections for chemicals and radionuclides on the Brandeis-Bardin property that have been raised as concerns by commenters were from samples taken during the 1992/1994 Multi-Media Study from areas that were subsequently acquired by Boeing in 1997 to create the NBZ and are no longer part of the Brandeis-Bardin property.

Concern about Contamination Released Off Site During Remediation

As described in Section 2.10, “Public Perceptions About Waste and Contamination in Area IV,” in this CRD, DOE has removed the nuclear material and all but 22 buildings (18 owned by DOE and 4 by Boeing) of the 272 structures that have been used during the operation period of Area IV. DOE has also removed much of the contamination within the remaining soil and buildings that resulted from nuclear research activities (see Section 3.2.5.3). Therefore, DOE does not agree with commenters who suggest that SSFL Area IV and the NBZ are “highly contaminated” nor that the site will result in offsite contamination during remediation.

In response to comments on the Draft EIS, DOE has added an offsite human health impact assessment by modeling potential releases of windblown dust to offsite receptors during remediation for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS.

All alternatives in this EIS would be implemented in compliance with applicable Federal, State, and local regulations and agreements and in a manner that would be protective of the surrounding communities by incorporating BMPs during remediation activities. BMPs such as traveling at low speeds on roadways and off-road areas; using water and/or surfactants during soil-disturbing activities; and covering or wetting disturbed soil and soil piles would be employed to control the airborne migration of dust off site. A BMP of washing the undercarriage of the trucks prior to leaving the site would avoid the direct transmission of potentially contaminated soil off site. Additional BMPs such as the use of silt fences, straw wattles, and contouring would be used to control stormwater and prevent the offsite transport of sediments from disturbed areas.

Concern about the Long-Term Migration of Contaminants Left On Site after Remediation

As described in Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” in this CRD, DOE has already removed all nuclear material, most buildings in Area IV, and much of the contamination within the soil and remaining buildings. The cleanup activities proposed in this EIS for DOE’s portions of Area IV and the NBZ would further reduce contamination to levels protective of human health and the environment or to background/detection limits.

In response to concerns about potential offsite human health impacts caused by migration of residual contamination left on site after remediation, DOE has added analyses in Chapter 4, Section 4.9 of this Final EIS for an offsite resident. As discussed in Section 4.9, the impacts to an offsite suburban resident from the migration of contamination under the No Action Alternative have been compared to the impacts to the same resident from background concentrations of the same chemicals and radionuclides. The risks from the SSFL contaminants are considerably smaller than the risks from background concentrations of chemicals and radionuclides in soil. The calculated risk of cancer to an offsite suburban resident (with garden) from the migration of chemical and radiological contamination under the No Action Alternative is approximately 1.2×10^{-11} . The incremental impacts from exposure to windblown, post-remediation residual concentrations of chemicals and radionuclides on the site to persons living off site near SSFL would

be expected to be less than the impacts from the No Action Alternative, because the remaining onsite concentrations would be lower than those under the No Action Alternative.

2.8 Cancer and Other Illnesses Near SSFL

Comments Summary

A wide variety of comments were received that addressed concerns about health effects attributed to sources at SSFL. Some commenters who live or lived in the vicinity of SSFL reported personally experiencing cancer and other illnesses. Commenters also reported of family members or others they personally know who live or lived in the vicinity of SSFL having experienced cancer or other illnesses. Health effects mentioned include colon cancer, gastritis, Hashimoto's disease, hypothyroidism, leukemia, lymphoma, neuroblastoma, regressive autism, retinoblastoma, salivary gland cancer, thyroid cancer, uterine sarcoma, unspecified cancers, and unspecified diseases. In some cases, the illnesses resulted in death.

Some commenters made nonspecific comments about rare forms of cancer occurring in the vicinity or children in the vicinity developing rare forms of cancer. One commenter displayed a map and stated that it showed the locations of 35 children within 20 miles of SSFL who have been diagnosed with cancer within the last 5 years. Multiple other commenters made similar statements regarding more than 30 children with cancer within 20 miles of SSFL or preliminary evidence of a pediatric cancer cluster.

Those commenting expressed various opinions regarding the cause of these illnesses. Some commenters stated that SSFL was affecting the health of adults and children; some of those commenters specifically cited radioactive contamination in the area as the cause. Some wondered whether there is a relationship between the illnesses and SSFL.

An opposing viewpoint regarding the source of illnesses in the vicinity was also expressed by some commenters. A commenter indicated that he believes there is little evidence to show that anything from SSFL has caused cancer. Another commenter indicated not being familiar with any convincing epidemiological evidence of current offsite risk from the site. Further, the commenter stated that many of the reported cancers are known to be or suspected of being the result of genetic factors and others could have a variety of environmental triggers (e.g., air pollution, household air pollution from formaldehyde and/or household products). This commenter further stated that there are many variables related to the origin of specific cancers and that it is hard or impossible to control the variables. Examples given were the amount of time a person lived in the vicinity of SSFL, the uncertainty that a person was exposed to a carcinogen from SSFL, and if they were exposed, the duration and dose of the exposure. Commenters also noted that data indicate that some areas within the vicinity of SSFL have elevated levels of naturally occurring radon. A commenter asserted that there were no cancer clusters in the area, referring to a presentation by Dr. Mathew [Mack] at a DTSC meeting.

Commenters expressed a general sentiment regarding the necessity and responsibility of protecting the health of people living near SSFL. Some of those commenters were particularly concerned about protecting children, with a number specifically concerned about their own children. A commenter stated that, contrary to DOE's claim that the contamination poses little risk, that it poses a very significant risk to public health and that under any of the alternatives evaluated in the Draft EIS, human health and the environment will suffer. A number of people indicated concern that families are moving nearby with no real understanding of the potential dangers. Commenters indicated that residents in the area surrounding SSFL deserve to know they are raising their families in a safe and healthy environment.

Commenters referred to some of the studies of health effects near SSFL that have been conducted and presented different interpretations of the results. Commenters pointed to the September 1997 Tri-Counties Regional Cancer Registry-reported increases in lung and bronchial cancers near SSFL as evidence that pollution has already migrated off site to adjacent populated areas, carried by wind, rainfall runoff, and fires.

Commenters cited the March 2007 study by Dr. Hal Morgenstern of the University of Michigan as identifying increases in thyroid cancer cases, while others stated that the study found a greater than 60 percent increase in incidence of various cancers based on proximity to the site. Another commenter referred to the study as a preliminary study that indicated that if the site was left intact, people would continue to suffer or die in the nearby community but noted that no study has been made about the increased amount. The commenter said that Dr. Cohen at the University of California, Los Angeles (UCLA) agreed that leaving it (site contamination) in place all these years continues to hurt people.

Another commenter said the 2007 Morgenstern study showed limited concerns for some cancers and only close to the site, noting that beyond 5 miles from the site there is no effect from the SSFL. The commenter also noted that nearer the site (i.e., less than 2 miles) the incidence of melanoma, breast, and prostate cancers are actually lower than the normal incidence rate. The commenter posited that these numbers need to be considered along with those showing increases in incidences of other cancers. The commenter concludes that the current risk is *de minimis*. Another commenter commented that cancer is multifactorial and stated that the 2006 Cohen and 2007 Morgenstern studies indicated that they could not attribute the occurrence of cancer to SSFL for a multitude of reasons.

Commenters referred to a number of other studies stating that cancer registries found elevated rates of bladder cancer associated with proximity to SSFL and that the Public Health Institute's 2012 California Breast Cancer Mapping Project found that the rate of breast cancer is higher (10 to 20 percent) in Thousand Oaks, Simi Valley, Oak Park, and Moorpark than in almost any other place in the State.

Some commenters called for there to be research into the links between cancer and the chemicals deposited in the earth. A number of commenters stated that "[n]ot having a full survey done of the risk to children in our communities" is not acceptable. Commenters requested that a study be conducted to evaluate all cancers and childhood cancers within 20 miles of SSFL. Others suggested that there should be an ongoing record of rare cancers and illnesses that occur within certain distances from SSFL.

Some commenters also referred to cancer claims from former SSFL workers. One commenter referred to a study by the UCLA School of Public Health and said it found markedly increased rates of death from key cancers for SSFL workers associated with their exposures and the most highly exposed workers had triple the deaths from those cancers as did less exposed SSFL workers.

Response

Cancer has touched most if not all of our lives and DOE understands the impact it can have on those who have chronic illnesses or cancer or who have lost family or friends to disease. Cancer has a major impact not only on family and friends but also on society at large in the United States. As noted by the National Cancer Institute (NCI), "Although statistical trends are usually not directly applicable to individual patients, they are essential for governments, policy makers, health professionals, and researchers to understand the impact of cancer on the population and to develop strategies to address the challenges that cancer poses to the society at large" (NCI 2017). The number of new cases of cancer (cancer incidence) in the United States is about 454.8 per 100,000

men and women per year⁷ (based on 2008–2012 cases) (NCI 2017). That means it is estimated that 1.48 million new cases of cancer will be diagnosed in the United States this year (based on an estimated U.S. population of 325.98 million in 2017). The California Department of Public Health (CDPH) estimated 176,140 Californians will be diagnosed with cancer in 2017 (ACS 2017) and yet California has the 9th lowest rate of incidence of cancer among all states at 409.8 per 100,000 men and women per year (based on 2010–2014 cases) (NCI/CDC 2017). Approximately 41 percent of men and 38 percent of women will be diagnosed with cancer at some point during their lifetimes (ACS 2017). The CDPH estimated that 1,492,000 Californians alive today have a history of cancer (ACS 2017).

Cancer is caused by both external factors (e.g., tobacco, infectious organisms, chemicals, and radiation) and internal factors (e.g., inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). Risk factors for cancer include age, alcohol, cancer-causing substances, chronic inflammation, diet, hormones, immunosuppression, infectious agents, obesity, radiation, sunlight, and tobacco (NCI 2017). Therefore, to determine the cause of any incidence of cancer can be very difficult as there are many confounding factors.

NCI defines a cancer cluster as “the occurrence of a greater than expected number of cancer cases among a group of people in a defined geographic area over a specific time period” (NCI 2014). Cancer clusters can help scientists identify cancer-causing substances in the environment. Suspected cancer clusters are investigated by comparing information about cases in the suspected cluster with State cancer registry records and census data. If a statistically significant excess of cancer cases is found, an epidemiology study is performed to investigate whether the cluster is associated with risk factors in the local environment and a true cancer cluster exists.

In spite of, and also because of the high rates of cancer incidence nationally and in California, the variability in the rates by location resulting from many confounding factors make it difficult to identify clusters at localities where increased rates occur due to local exposure to an environmental contaminant. NCI has noted that “most suspected cancer clusters turn out, on detailed investigation, not to be true cancer clusters. That is, no cause can be identified, and the clustering of cases turns out to be a random occurrence.” They appear to be clusters because cancer is so common. NCI further states, “Even if a possible association with an environmental contaminant is found, further studies would be needed to confirm that the environmental contaminant did cause the cluster.” They also note that “even a cluster that shows a significant difference between actual and expected numbers of cases can arise by chance” (NCI 2014).

Eight different health effect and cancer cluster studies have been performed for the counties and census tracts surrounding SSFL. As summarized in Chapter 3, Section 3.9.4, these studies have either found no evidence of elevated cancer rates for areas surrounding SSFL that were statistically significant, that rates could be explained by uncontrolled confounding or imprecision in the data, or that excess rates could not be associated with known carcinogens in the environment associated with activities at SSFL.

The September 1997 Tri-Counties Regional Cancer Registry finding reported to show increases in lung and bronchial cancers within a 5-mile radius around SSFL in Ventura County was from a letter from Dr. Nasserri (Nasserri 1997a). The study included census tracts in eastern Ventura County near SSFL and compared their cancer rates with the rest of the Tri-County Region (Ventura, San Luis Obispo, and Santa Barbara Counties). In context, the letter explains, “Among the moderately radiosensitive cancers, the total number of registered cancers of the lung & bronchus is significantly higher than expected. Close to 85 percent of all lung cancers are due to smoking tobacco.

⁷ Cancer rates are age adjusted, meaning age-specific rates are combined into a single rate that applies to the population as a whole.

Unfortunately, the cancer registry does not collect proper data on smoking.” Because of the possible confounding of the data with smoking effects, specific correlations of lung and bronchus cancers with distance from SSFL were not possible and further studies were recommended. Dr. Nasserri wrote another letter 2 days earlier to a resident in Bell Canyon (Nasserri 1997b) stating “residents of census tract 75.03 [the census tract that includes SSFL] in Ventura County that includes your neighborhood, are not at higher risk of being diagnosed with cancer when compared to the rest of the population in the Tri-Counties Region.” This letter was followed up with another letter in 2006 that showed lower than expected cases of lung and bronchus cancers for tract 75.03 and stated “I conclude that occurrence of newly diagnosed invasive cancers in census tract 75.03 in Ventura County, that includes your neighborhood, does not show any unusual pattern and has actually decreased by 7.5 percent from 1988 through 2004” (Nasserri 2006). Furthermore, there is no evidence of environmental exposure to radiological contaminants in the area surrounding SSFL, the area examined in the study (see below).

The 2007 University of Michigan report by Morgenstern et al. (University of Michigan School of Public Health 2007) investigated the rates at which newly diagnosed cases of cancer occurred in Ventura and Los Angeles Counties between 1988 and 2002 as a function of distance from SSFL by dividing the region into three exposure areas (less than 2 miles, 2 to 5 miles, and greater than 5 miles from SSFL). The investigation showed standardized incidence rate ratios were close to 1, indicating little or no association for total cancers and radiosensitive cancers among adults, but the incidence rate of chemosensitive cancers was slightly elevated during both follow-up periods in the population living within 2 miles of SSFL. However, the report explained there were two main limitations in the study. First is the absence of either environmental or individual-level data for measuring exposures to ionizing radiation or toxic chemicals. The report explained that, “Distance from SSFL is a very crude proxy that does not take into consideration the fate and transport of hazardous substances migrating off site, local geological and meteorological conditions, and the behavior of residents that would affect their levels of exposure.” Second is the lack of information on potential confounders associated with exposure status in the population. They explained that, “It is possible that differences in cancer rates between the three regions were partly due to the effects of other cancer risk factors, such as cigarette smoking for lung, bladder, and upper-aerodigestive-tract cancers, air pollution for lung, bladder, and childhood cancers, diet for colon, breast, and prostate cancers, and socioeconomic status and various occupational exposures for several cancers.” The report concludes, “Since there are several alternative explanations for our findings, including chance and bias, it is tempting to recommend extending our study to include additional information on environmental exposures and potential confounders and the use of more sophisticated Bayesian methods of statistical analysis. ... It is not clear, however, if this ecologic approach will yield more informative and less biased results.” The study further states “An alternative approach for learning more about environmental risk factors for cancers in the communities near SSFL is to conduct an observational study at the individual level, e.g., a cohort or case-control study. Unfortunately, this approach would be costly, and it would still be subject to problems of exposure measurement, population mobility, and relatively small numbers of exposed residents.” There is no evidence of environmental exposure to radiological contaminants in the area within the 5-mile area surrounding SSFL, the area of the study (see below).

Cohen et al. studied potential exposure pathways and investigated how contaminants might migrate from the SSFL to nearby communities (UCLA 2006). The report on the study concludes that, because of data limitations, the authors could not conduct a quantitative dose reconstruction and health risk assessment. Instead, the report only discusses potential community exposures and stresses, stating that “Assessing health impacts in a quantitative manner is beyond the scope of the present study.” Since the report was issued in early 2006, it did not have the benefit of the offsite data report jointly issued by Boeing, NASA, and DOE in 2007 that presented results of over 4,000

samples jointly collected from offsite areas surrounding SSFL, representing over 110,000 analyses of chemicals or radionuclides (MWH 2007). These results are discussed below.

A report by the California Department of Health Services on cancer incidence rates in five Los Angeles County census tracts within a 5-mile radius of SSFL stated that age-adjusted incidence rates were consistent with random variations (DHS 1992). Although in 1990 one census track showed a significantly higher age-adjusted rate of bladder cancer, the 1992 report stated that its analysis suggested that people living near SSFL were not at increased risk for cancers associated with radiation exposure. The increase in bladder cancer in the 1990 study appeared to be restricted to men in Los Angeles County, and there was an increase in lung cancer among Ventura County men. Lack of an increase in the most strongly radiosensitive cancers suggested causes other than exposure to radiation.

Public Health Institute's 2012 California Breast Cancer Mapping Project (PHI 2012) found that the rate of breast cancer was higher in west Los Angeles County/east Ventura County (areas adjacent to SSFL) than the California State average. However, the project found a couple of anomalies in the demographics data. The west Los Angeles/east Ventura area had a higher proportion of white females and a lower proportion of Hispanic females compared to California as a whole. The female population also tends to be slightly older compared to the California population. Although the rates were age-adjusted, they were not adjusted based on race. The study said that white women face an increased risk of breast cancer, which may have caused the higher results. In addition, Ventura County as a whole has higher rates of breast cancer than the State average. When west Los Angeles/east Ventura area rates are compared to county-wide rates for both counties, the incidents of breast cancer are indistinguishable when the confidence interval (or uncertainty range) is considered, and is less than the Ventura County rates as a whole for most years. Therefore, the data indicate that there is no significant difference in rates relative to proximity to SSFL.

DOE and EPA have conducted extensive studies to map the chemicals and radioactivity, respectively, on SSFL Area IV and the NBZ (CDM Smith 2017, HGL 2012b). Boeing, NASA, and DOE have also jointly collected over 4,000 samples from offsite areas surrounding SSFL, representing over 110,000 analyses of chemicals or radionuclides (MWH 2007). Based on these monitoring data, DOE is confident that significant levels of contamination have not traveled and are not now traveling off site from Area IV. Therefore, DOE believes there is no association of cancer incidences in the surrounding community with environmental contaminants released from Area IV. See Section 2.7, "Offsite Impacts," in this CRD for a response to concerns about offsite health impacts and a discussion of offsite environmental sampling results. Note that DOE's responsibility, and the subject of this EIS, is for Area IV and the NBZ (not the entirety of SSFL).

Furthermore, the focus of DOE's current effort is cleanup of residual contamination at the site. Therefore, consideration of further health studies evaluating historical releases and impacts is outside the scope of the EIS. However, a report from the CDPH's California Cancer Registry on cancer statistics for any California county is available online (CCR 2017) and a study by the Tri-Counties Cancer Registry can be obtained upon request. The additional information discussed above on the existing health studies has been added to the Final EIS.

While the health effects of previous site worker occupational exposures during SSFL operations are outside the scope of this EIS, health effects among workers could inform health effects among the offsite population who would have, by reason of distance, received much lower exposures from any potential releases at the site. Therefore, the findings from several worker health effect studies are included below.

In June 1997, UCLA released a worker health study on workers exposed to ionizing radiation at Rocketdyne (UCLA 1997), and issued an addendum health study on workers exposed to selected

chemicals in January 1999 (UCLA 1999). The study concluded that Rocketdyne workers who were monitored for external radiation and received higher doses (especially more than 20,000 millirem) had an increased risk of dying from cancers of the blood and lymph system (such as leukemia and lymphoma) and from lung cancer. The study also found that Rocketdyne workers monitored for internal radiation and that received a relatively higher dose (especially more than 3,000 millirem) had an increased risk of dying from cancers of the blood and lymph system and upper aero-digestive tract cancers (mouth, throat, esophagus, and stomach). The addendum study reported an observed positive association between presumptive exposures to hydrazine and the rates of death from lung cancer.

The Agency for Toxic Substances and Disease Registry (ATSDR) comprehensively studied the two UCLA study reports (ATSDR 1999). ATSDR observed a number of limitations in the interpretation of data from the first report (i.e., UCLA 1997) on ionizing radiation exposure impacts. Although the study measured cumulative SSFL exposures, exposures received before employment at SSFL could not be accounted for because of inconsistency in the recording practices. ATSDR also noted that the study attempted to control for the effect of other chemical exposures (i.e., hydrazine and asbestos) but that misclassification of the chemical exposures was highly likely. Additionally, ATSDR noted another problem with the study was the small number of cancer deaths reported, particularly in the high-dose group (e.g., greater than 20,000 millirem). Considering the limitations of the study, ATSDR concluded that the most consistent and biologically plausible finding of the study was the association with hemato-lymphopoietic cancers. They noted that an observed positive relationship between external radiation and lung cancer mortality has not been reported consistently in other studies of nuclear workers.

ATSDR also observed some limitations of the study on chemical exposure impacts detailed in UCLA 1999. Although the study was able to identify work locations with a high probability of exposure to hydrazine and asbestos at the SSFL site, information was not sufficient to link individual workers with job locations. As a result, there was inadequate information on exposures to individual workers because the exposure classification was based on job titles. In addition to the possible exposure misclassification, bias may also have been introduced by confounding factors. Exposure information on other risk factors, such as exposure to other chemicals (e.g., trichloroethylene and nitrosamines) or personal characteristics was not available for the study. ATSDR also noted that there was also a possibility that the radiation exposures are misclassified, hindering the ability to control for confounding by radiation exposures. ATSDR concluded that, given the uncertainties, the authors' recommendation that the worker group should be studied further is reasonable, since the result shows a positive association and health effects of exposure to these chemicals in humans are not well understood.

In 2005, International Epidemiology Institute (IEI) studied 46,970 Rocketdyne workers employed for at least 6 months in either nuclear technology development or in rocket engine testing since 1948 at SSFL and at nearby facilities, including Canoga Park and De Soto Avenue in Chatsworth (IEI 2005). The IEI study estimated radiation doses from biokinetic models for 16 organs or tissues and combined external and internal dose measurements in their analyses of specific cancers. They also included radiation doses received before and after employment at Rocketdyne to estimate radiation effects and compared radiation-monitored workers with unmonitored workers assumed to be unexposed. They also took into consideration a greater smoking prevalence among hourly workers, based on a survey of 139 workers, as compared to the general population of California.

The IEI report concluded the following:

- “The Rocketdyne workforce overall, including those monitored for radiation, those employed at SSFL and test stand mechanics potentially exposed to hydrazines or TCE

[trichloroethylene], did not experience a statistically significant increased mortality for any cancer, including lung cancer, that could be linked to radiation dose, years of employment at SSFL, years of employment as a test stand mechanic, or years of potential exposure to hydrazines or TCE.”

- “No statistically significant internal cohort dose-response relationship was seen for leukemia, lymphoma, or cancers of the esophagus, liver, bladder, kidney or any other cancer over categories of radiation dose or years of potential chemical exposure.”
- “We conclude that radiation exposure has not caused a detectable increase in cancer deaths in this population and that work at the SSFL rocket engine test facility or as a test stand mechanic is not associated with a statistically significant⁸ increase in cancer mortality overall or for any specific cancer.”
- “A slight non-significant increase in leukemia (excluding CLL [chronic lymphocytic leukemia]) was seen among radiation workers, although a similar non-significant increase in CLL (a malignancy not associated with radiation) was also observed. A slight non-significant increase in kidney cancer and a slight non-significant decrease in bladder cancer were also seen among radiation workers.”

The IEI study was more rigorous and had fewer data limitations than the UCLA study. The lack of a significant increase in cancer mortality among workers who had measured occupational exposures to radiation and potential occupational exposures to chemicals suggests that any increase in cancer rates among the offsite population who would have, by reason of distance, received much lower exposures from any potential releases at the site would be even less significant if present at all.

2.9 Options for Transportation of Waste from SSFL

Comment Summary

Commenters were concerned that DOE inflated soil volume estimates and, therefore, the estimated number of truck trips and failed to consider alternative routes and methods to transport soil and waste off the site that would minimize truck traffic and neighborhood impacts. (For purposes of the Draft EIS, DOE assumed that all soil and waste would leave the site by truck, using Woolsey Canyon Road, but after reaching Valley Circle Drive, taking alternative routes to local freeways.) This was done, some commenters assert, to scare the public into believing that the impacts of transportation of the soil and waste would be greater than the impacts of leaving substantial contamination on site.

Assuming soil and waste was transported off site by truck, commenters suggested that DOE avoid or minimize routes through neighborhoods by considering use of less-populated roads from SSFL, including fire roads and other routes that could be constructed or improved for truck traffic. Commenters suggested use of a northern route to a freeway that would involve passing few, if any homes. One commenter referred to options presented in a 2014 alternative transportation study for SSFL cleanup by the SSFL Transportation Options Task Force (SSFL TF 2014).

With respect to the option of transporting soil and waste by truck to a location where the material could be loaded onto a train for transport to a disposal facility, commenters were concerned that DOE evaluated transport of the material 60 miles to the Puente Hills Intermodal Facility. Commenters were concerned that this analysis minimized the possible effectiveness of the truck/rail option. Factors cited by the commenters included the added effort in completing the Puente Hills Intermodal Facility as this station was not yet open and the failure to consider an existing rail siding,

⁸ For events to be statistically significant their likelihood can be attributed to something other than random chance.

rail line, or rail station north of the site that could be reached without passing many homes. Commenters described this alternative waste transfer location as being a block, a quarter mile, or a mile from SSFL.

Commenters also recommended that DOE consider options for removal of soil and waste from SSFL that would not involve trucking the material. One suggested option was to construct a rail line from SSFL. Other options involved construction of systems that would transfer the material to the rail siding north of SSFL, where the material would be loaded onto trains for shipment to disposal facilities. These transfer systems included conveyor systems, tunnels, and pipelines. Conveyor systems were suggested that would use closed containers. Suggested tunnel systems would entail construction of a small-diameter (about 6 feet) tunnel that would transfer materials within bins. In addition, a pipeline was suggested that would move soil that had been converted into slurry by adding water.

Response

DOE did not inflate estimates of soil volumes or truck trips, but used the available information to develop estimates for analysis. The analyses reflect the more than 8,000 soil samples analyzed for chemicals and 3,000 soil samples analyzed for radionuclides. Since the Draft EIS was prepared, DOE has independently evaluated the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Details of the estimation process are provided in Appendix D of this EIS. Based on the characterization data and an improved understanding of the soil depth over uneven bedrock across Area IV and the NBZ, DOE has greater confidence in the soil volume estimate than it did at the time the Draft EIS was prepared. DOE has reduced the uncertainty factor used in the soil volume estimate to 20 percent. This Final EIS estimates that 881,000 cubic yards of soil would be removed from SSFL under the Cleanup to AOC LUT Values Alternative compared to 933,000 cubic yards estimated in the Draft EIS.

At the time the Draft EIS was prepared, DOE understood that the DTSC was conducting a transportation study to evaluate alternative means of transporting debris and soil from SSFL. DOE intended to use the results of that study, should it identify potentially viable routes or transportation methods, as the basis for evaluating their feasibility (including needed permits, land purchases, costs, resource studies, and impacts to schedule) and potential environmental impacts (as necessary to comply with NEPA). The draft transportation study is now available in the *Draft Program EIR* (DTSC 2017b), Appendix J. DTSC concluded that the environmentally superior option that meets the purpose of the proposed action includes transporting waste to disposal sites by truck via Woolsey Canyon Blvd. This method of transportation was identified as the least environmentally impactful while being the most technically feasible.

Many of the options noted by commenters were discussed in the Draft EIS, in both Chapter 2, Section 2.2.3, and in Appendices D and H. Chapter 2, Section 2.2.3 of this Final EIS was revised to expand the discussion of transportation options considered but dismissed from detailed evaluation. As described in the revised Section 2.2.3, DOE considered concepts such as improving fire roads and Black Canyon Road as potential alternative truck routes north from SSFL into Simi Valley. (Many of these concepts were also considered in the DTSC *Draft Program EIR*. Section 2.2.4 of this Final EIS discusses the treatment of transportation concepts in that document.) Concepts involving constructing new roads or making major improvements to existing currently unsuitable roads were not evaluated in detail because, DOE believes that, the time required to study, design, and construct such large infrastructure projects would unreasonably delay initiation of the SSFL cleanup relative to the currently available option of transportation via Woolsey Canyon Road and existing local roadways. In addition, there would be a substantial risk of additional delay and cost escalation associated with lawsuits and right-of-way issues.

In Chapter 2, Section 2.2.3 of this EIS, DOE also considers other transportation modes, including building a conveyor or other transport system (including tunneling) to a railroad siding. Concepts involving developing alternate transport systems such as conveyors or tunnels were not evaluated in detail. (The DTSC treatment of these transportation modes is also discussed in the Final EIS Chapter 2, Section 2.2.4.) As with alternative truck routes, DOE believes that the time required to study, design, secure rights-of-way, and construct such large infrastructure projects would unreasonably delay initiation of cleanup relative to the currently available transportation option via Woolsey Canyon Road and existing local roadways..

As described in Appendix D of this EIS, for purposes of analysis under the truck/rail transportation option, the Puente Hills Intermodal Facility in City of Industry, California (about 60 miles from SSFL), was used as the representative facility for the transfer point where wastes would be placed on railcars for delivery to appropriate disposal facilities. As opposed to a passenger train station (which for safety reasons would not be considered), an intermodal facility is designed to accommodate large trucks and industrial equipment (cranes or forklifts) for transferring containers between trucks and trains. In selecting this facility as a representative facility for purposes of analysis, there was no intent to preclude other locations that could be used or developed for intermodal transfer of SSFL material to trains. However, any location to be used for intermodal transfer would need to be assessed for suitability (e.g., sufficient space for access roads, truck parking areas, cranes, and other required infrastructure), security, and safety. Development of an intermodal transfer facility could require purchasing land, acquiring right-of-ways, preparing environmental assessments, obtaining permits, and constructing or modifying the facility.

The Puente Hills facility was selected as a representative facility for analysis because it is a reasonable distance from SSFL, so that a single driver would be able to make the roundtrip two to three times a day; there is existing or planned infrastructure such as access roads, rail sidings, cranes, etc., that would support waste transfer from truck to train; environmental assessments for construction and operation of the facility have been prepared and published (City of Industry 2008, 2009); and the facility was completed in 2016 (although the facility is not being operated for economic reasons). As discussed in Appendix D of this EIS, other existing facilities near the ports of Los Angeles and Long Beach are closer to SSFL. These facilities are designed for intermodal transfers from cargo ships rather than trucks, and modifications would likely be required to use these facilities.

Regarding the cited rail system north of SSFL, DOE acknowledges that, as described in Chapter 3, Section 3.8.5 of this EIS, a rail line exists north of SSFL; it is a Los Angeles Metropolitan Transportation Authority/Union Pacific line. This is a high-speed public transportation line with no intermodal freight service in Simi Valley. The railroad station north of SSFL referenced by some commenters appears to be the Santa Susana Railroad Depot and Museum at Santa Susana Park & Railroad, near the intersection of Santa Susana Pass Road and Katherine Road. This is a museum, not a functioning rail depot or intermodal facility. There is also a Simi Valley Train Station, as one commenter referenced, at 3030 Los Angeles Avenue, which is a stop for public transportation and not an intermodal rail facility.

DOE acknowledges that a railroad siding exists off Santa Susana Pass Road and east of the Santa Susana Railroad Depot and Museum. The available space at this location appears to be narrow, with a rocky outcrop on one side. In its *Draft Program EIR*, DTSC evaluated a location in this vicinity as the terminus of a conveyor system and a rail loading facility. Sufficient land would need to be acquired; appropriate environmental assessments would need to be prepared and permits acquired; and the infrastructure required to transfer soil and waste from trucks to rail cars would need to be constructed. These activities would take time to complete, which could delay initiation of the project relative to the availability of other options. Also note that the suggested railroad siding is located between two recreational areas: the Santa Susana Railroad Depot and Museum to the east

and Corriganville Park to the west. The potential impact on these two recreational areas would need to be evaluated.

The most direct route to the cited railroad siding would cover approximately 4.6 road miles and would entail truck travel over a road that is asphalt over only a portion of this distance and would require capacity and safety improvements such as widening, paving, and installing guard rails before it could be safely used. Appropriate environmental assessments and permits would need to be prepared and acquired for the road improvements. There would be the same considerations if this route was used as the northern route to a freeway (Highway 118) as suggested by commenters. As discussed above, DOE addressed alternative truck routes in Chapter 2, Section 2.2.3 of this EIS.

Building a conveyor, tunnel, or pipeline to transport waste and soil to the railroad siding instead of building a new or improving a roadway would be subject to the similar issues as a roadway, including developing the proper infrastructure at the railroad siding; obtaining the right-of-way; and conducting environmental assessments and obtaining permits. Additionally construction of a conveyor, tunnel, or pipeline system would be more complex, costly, and time consuming than any roadway construction. Making soil into a slurry (as would be required to use a pipeline) would have other potential impacts beyond tunnel and conveyor options, namely water usage, the need for soil drying facilities, and additional air emissions from those drying facilities. (Waste cannot be transported or disposed with the amount of free liquid that would be required to fluidize the soil to allow flow through such a pipeline.)

2.10 Public Perceptions about Waste and Contamination in Area IV

Comment Summary

Commenters expressed concern about the waste and contamination present on site. These commenters expressed their belief that the site is still severely chemically and radioactively contaminated due to testing, dumping, meltdowns, accidents, spills, and releases of dangerous nuclear and chemical contamination in the past. In addition, several of these commenters indicated a belief that no study has ever been conducted by DOE to show the extent of the contamination on site or “no actual study had been done to show how far and in what manner the contamination is spreading.” Other commenters believe that while these kinds of studies have been conducted, many highly contaminated areas were left out. Some commenters go further and demand that “the DOE will need to conduct additional Site investigations to further address the data gaps and more adequately characterize” the toxic conditions of the site. The following items summarize specific statements included in comments:

- Commenters referred to the test stands on the hill and the thousands of rocket tests that were performed. They noted that large quantities of water and toxic solvents, specifically trichloroethylene were used in support of these tests and allowed to percolate into the soil and groundwater.
- Commenters made reference to waste being taken up the hill from all across the country from other nuclear facilities for destructive examination or de-cladding and reprocessing and reuse. They also referred to a factory for fabricating reactor fuel rods out of plutonium. They also noted that there were 10 nuclear reactors, at least 4 of which suffered accidents (including the 1959 SRE accident).
- Commenters made reference to the poor environmental and safety practices of DOE and the Atomic Energy Commission (AEC), a predecessor agency of DOE. Some commenters referred to past releases and spills. Others stated that there were decades of discharge of

chemicals and radionuclides into the environment and referred to illegal storing, disposal, and burning of radioactive and chemical materials.

- Commenters also made note of specific items, including that
 - The Building 56 landfill consists of unknown debris, the landfill excavation is a 50-foot deep hole that was not used during reactor construction because it intercepted groundwater, that outfall 7 was constructed because the landfill was an acknowledged problem area, and that the bottom of the pit and the ramp area contain debris.
 - The Building 4024 driveway/loading area contains deep below ground storage tanks.
 - The Old Conservation Yard had tens of thousands of containers of waste disposed of by throwing them down the hill.
 - The Sodium Reactor Experiment vicinity has highly radioactive tanks in the hills above the site and the site and its surroundings are massively contaminated at thousands times background.

Response

DOE understands that many remain concerned about contamination and past practices at SSFL. The EIS was prepared to support DOE's plans to address contamination that remains at the site today. The EIS is based on currently available information developed from the more than 3,000 samples taken by EPA for radionuclides and 10,000 samples taken by DOE with DTSC oversight for chemicals. DOE's current plans and the actions evaluated in this Final EIS addressed the cleanup of Area IV and the NBZ as they exist today. A number of the comments received on the Draft EIS addressed practices or events that occurred in the past; some address activities that occurred in locations at SSFL other than Area IV and the NBZ, and some statements are inaccurate characterizations of past or current conditions.

As noted in Chapter 1, Section 1.3 of this EIS, SSFL is divided into four administrative areas and two contiguous buffer zones north and south of the administrative areas. This EIS was prepared to address the remediation of Area IV and the NBZ, those parts of SSFL for which DOE is responsible. This does not include the test stands and rocket tests performed in other areas of SSFL; the responsibility of NASA and The Boeing Company. The scope of remediation addressed in this EIS does not include the other parts of SSFL, which are the responsibility of NASA and Boeing. Commenter references to rocket stands, rocket tests, and the use of chemicals and water associated with those tests apply to locations at SSFL other than Area IV and the NBZ. Those locations are being cleaned up by NASA or Boeing under the oversight of DTSC.

DOE's facilities in Area IV performed research and technology development throughout its operating history. As part of that work, DOE (and the AEC) operated 10 small nuclear reactors and operated test laboratories for liquid metals (sodium and potassium) research, nuclear energy development, and radioactive waste management. As part of those research activities, various nuclear materials were received from off site for testing and examination, and laboratories fabricated and tested materials in onsite laboratories. The purpose was technology research and development. None of the facilities (e.g., reactors) or activities (e.g., fuel examination, processing, and fabrication) were conducted at a commercial scale.

Regarding comments about past waste management practices at SSFL being illegal, DOE acknowledges that many of the waste management practices employed in Area IV in the past would not be acceptable today. However, these practices occurred before the enactment of many of the State and Federal environmental laws that exist today and were consistent with then-current practices and governed by then-current regulations. This included the use of leach fields for

disposal of certain types of wastes, onsite disposal and storage, as well as open-air burning and the open-air reaction of sodium and/or potassium. Because sodium and potassium react violently when exposed to water, components from research (e.g., valves, piping, vessels, and insulation) with small quantities of these elements were treated by exposure to water. Components were either tossed into a pool of water or sprayed with water hoses. On occasion, vessels with residual materials were punctured remotely by shooting with a rifle (Rockwell 1988). These past practices, as well as inadvertent releases, are the source of the residual contamination addressed in this EIS. As discussed below, most of the buildings and much of the contamination associated with past practices have been remediated during previous cleanup activities.

Soil cleanup actions within Area IV were undertaken starting in the 1960s whenever a spill or release was observed (see Chapter 3, Section 3.2.5.3, of this EIS). The majority of the cleanup actions in the 1960s and 1970s focused on radioactively impacted soils. In the 1980s and 1990s, soil cleanup actions also included removal of soil contaminated by chemicals. In all, more than 50 soil removal actions have occurred within Area IV. Figure 3–14 of the EIS shows locations of the prior cleanup actions discussed below (additional discussion of these activities is also provided in Chapter 3, Section 3.2.5.3, of the EIS). Notable soil cleanup actions include the following (HGL 2012a):

- Former Sodium Disposal Facility – During the 1990s, 14,000 cubic yards of soil and 20,000 pounds of debris were removed during a series of cleanup actions.
- Building 100 Trench – In 2003, 330 cubic yards of scrap metals, asbestos, and building debris were removed.
- Building 56 Landfill – In the early 1980s, drums containing industrial wastes and building materials such as asphalt, concrete, and scrap metal were removed from the surface.
- Radioactive Materials Handling Facility (RMHF) – The RMHF and surrounding area have been subject to a series of soil cleanup actions following spills or when survey data identified elevated readings of radioactivity. The leach field, including impacted bedrock and soil, was removed in 1978. Approximately 296 cubic yards of impacted materials were removed. In 2003, 130 cubic yards of radiologically contaminated soil in the main RMHF storage area was excavated. In 2006, 7 cubic yards of impacted soil were removed from the RMHF north slope along with 20 cubic yards from the RMHF catch basin. In 2008, an additional 13 cubic yards of impacted soil were taken from a location west of the RMHF boundary. All materials excavated from the RMHF and vicinity were transported to a licensed radioactive waste disposal facility.
- Sodium Reactor Experiment Watershed – Demolition of the buildings and support facilities that composed the Sodium Reactor Experiment started in 1974 and was completed in 2001. When contaminated soil was observed during building removal, the soil was excavated and transported to a licensed radioactive waste disposal facility.
- Old Conservation Yard – The yard area once had two 1.5-million-gallon diesel storage tanks (removed in 1994) and was also used for the storage of drummed wastes and salvageable materials. All drums and materials have been removed. When discovered, soil impacted by radionuclides and chemicals was removed.
- 17th Street Drainage and Pond – The 17th Street Drainage directed surface water flow from the central part of Area IV to a bermed pond in the southern part of Area IV. Releases of chemicals and radionuclides from several facilities impacted the drainage and pond. Surveys were used to locate impacted soils and sediment. The drainage and ponds were subject to several cleanup actions ending in 2001.

- Leach fields – From the mid-1950s to 1961, sanitary wastes generated during operations were directed to 1 of 15 leach fields. In 1961, Area IV was connected to the central waste water treatment facility in Area III, and the leach fields were taken out of service for sanitary purposes. As each associated building was demolished, the leach field sites were removed and sampled for contamination.
- Building removals – Over the operating life of Area IV, there have been over 250 numbered structures built. As the missions of individual buildings ended, the buildings were removed. During the process of building removal, contaminated soil that was encountered was also removed. Today, only 22 buildings remain in Area IV; 18 are the responsibility of DOE and 4 are the responsibility of Boeing.

Chemical and Radiological Contamination in Area IV of SSFL

During the late 1990s to about 2005, soil samples were collected under a Resource Conservation Recovery Act (RCRA) Facility Investigation (RFI). Locations where chemicals were used, stored, or disposed of were sampled. During the RFI, 2,259 soil samples were collected for chemical characterization. These included samples from drainages north of Area IV (in the NBZ).

In 2011, following the signing of the AOC, DOE provided \$41 million to EPA to conduct on site and background radiological studies for Area IV. EPA's first activity was performing a review of hundreds of historical records of facility operations, waste management practices, and releases during operations, including an evaluation of aerial photographs of Area IV over the years (HGL 2012a). EPA also conducted a walk-over gamma scan to identify areas of elevated radioactivity and performed magnetometer surveys. EPA used the historical records review and field surveys to guide its sampling of soil for radionuclides. EPA collected 3,487 soil samples for radionuclide determination, including samples in drainages leading from Area IV. EPA identified cesium-137 and strontium-90 as the two radionuclides that exceeded its Field Action Levels⁹ most frequently. EPA only identified nine locations where cesium-137 exceeded 9 picocuries per gram (the soil cleanup standard was 9 picocuries per gram at the time the earlier cleanup activities were performed), and three locations where strontium-90 exceeded 9 picocuries per gram. Elevated concentrations of radionuclides were not observed in drainages leaving Area IV.

In addition, DOE with oversight by DTSC, collected soil samples at EPA's sample locations and analyzed those samples for chemicals. DOE collected additional soil samples at locations of suspected chemical contamination following the completion of EPA's study. From 2011 through 2014, DOE collected 5,854 soil samples for chemical analysis throughout Area IV and the drainages.

All data collected under the RFI, EPA's radiological program, and DOE's efforts in 2011 to 2014 were entered into a GIS database. The GIS was used to identify and plot locations where background was exceeded, and where RBSLs were exceeded. This database was also used to establish the basis for the soil cleanup alternatives and soil volume estimates presented in this EIS.

DTSC also used this database to evaluate the migration of contaminants from Area IV and determine whether users of the Brandeis-Bardin property would be at risk due to the contamination. DTSC's review of EPA's and DOE's data concluded that "The Northern Buffer Zone results showed no pattern or grouping of exceedances that indicate offsite migration of contamination that would pose a threat to students, faculty, staff or visitors to the Brandeis Bardin." Regarding chemical contamination DTSC concluded "The contaminants of greatest concern, identified

⁹ The Field Action Levels or FALs represent EPA's first derivation of soil background levels for radionuclides. EPA cautioned the use of FALS for identification of contamination stating, "Sample results exceeding the FAL do not necessarily represent locations of contamination" (HGL 2012b, page 4-1).

through extensive soils investigation, are confined to the SSFL site and do not extend off site” (DTSC 2017a).

The extensive soil sampling performed by EPA and DOE and the review of those data by EPA and DTSC show that the contamination has remained within Area IV. Radioactive contamination is restricted to about 12 locations, but chemical contamination is more widespread. The locations are well understood and primarily reflect locations where soil cleanup actions have not been undertaken or where prior removal actions did not remove all contamination. These locations do not pose a risk to offsite residents, as the contaminants are not moving off site.

DOE’s cleanup program will include confirmation sampling. After any excavation of contaminated material (building debris or soil) is completed, the location will be sampled and the samples will be sent to a laboratory for analysis. Cleanup will not be declared complete in any specific location until this sampling confirms that the remaining materials meet the cleanup standards agreed to by DOE and DTSC.

SECTION 3
PUBLIC COMMENTS AND DOE RESPONSES

3.0 PUBLIC COMMENTS AND DOE RESPONSES

This section presents a side-by-side display of the comments received by the U.S. Department of Energy (DOE) during the public comment period on the *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS)* and DOE's response to each comment. To find a specific commenter or comment in the following pages, refer to the "List of Commenters" immediately following the Table of Contents. This list is organized alphabetically by commenter name and shows the corresponding page number(s) where commenters can find their comment(s).

If commenters provided written comment documents that are essentially the same, these comment documents may be treated as a campaign. Commenters submitting documents as part of a campaign are referred to a copy of that comment document. This section only contains one representative copy of each campaign.

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Commenter No. 1: Michael W. Kuhn, PhD,
SSFL Community Advisory Group

January 31, 2017

Ms Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U. S. Department of Energy
4100 Guardian Street, Ste. 160
Simi Valley, CA 93063

From: Michael W. Kuhn, PhD
[REDACTED]

Subject: Comments on the Draft Summary of the EIS on the Cleanup of the Santa Susana Field Laboratory Area IV

Dear Ms Jennings:

As a member of the SSFL Community Advisory Group, I have read the summary of the draft EIS on the cleanup of the Department of Energy portion of the SSFL site. The document is thorough and exhaustive. However, I do have some comments.

P. x: The discussion of the 2007 cleanup standard should indicate that the risk for someone living on site 24/7, 350 days per year for 30 years of developing cancer due to exposure to man made contaminate would be one in one million. Since we all have a one in four risk of developing a life-threatening cancer during our lifetime, the 2007 risk-based residential standard would seem to provide adequate protect to all possible users of the site. While the risk standard represented by the 2007 AOC is noted elsewhere in the document, I think it is important to mention its meaning up front. The document is intended to communicate to the general public, not just to the well informed reader.

P. 11: This paragraph definitively states that places where soil and other geological material is removed would be backfilled and re-contoured. It is my understanding that to date, no one has been able to identify a suitable source of backfill. Any removal site would begin by removing soil section. Replacement with gravel or other non-soils would not represent satisfactory mitigation. In addition, there is the question of the off-site impacts to the environment at "borrow" sites.

P. 52: Noise Impacts: I cannot imagine that drivers of loaded vehicles hauling loads of material off the mountain down Woolsey Canyon Road would not be using their "Jake" brakes. The use of "Jake" brakes has an irritating impact on residents that is not adequately expressed by "noise equivalent levels." I am not suggesting that drivers should be prohibited from using Jake brakes. However, their use should be acknowledged when discussing potential noises.

P. 55: Cultural Resources: The removal of buildings and pavement is stated as not having a cultural impact. I would assume most of the remaining building are 50 or more years old. The other factor here is that nearly all of the built up area on the site was done without any consideration of the possible presence of archaeological materials. Certainly some areas underlying built up areas may include some significant prehistorical archaeological materials. All

- 1-1 DOE added information on risk associated with the 2007 consent Order Cleanup Standards (2007 Consent Order for Corrective Action) to Chapter 1, Section 1.3 and to the Summary, Section S.4, of this *Final SSFL Area IV EIS* (Final EIS).
- 1-2 DOE intends to continue consultation with the California Department of Toxic Substances Control (DTSC) to find a suitable backfill soil and would not use gravel or other material that would not be appropriate for restoring excavated areas of Area IV and the Northern Buffer Zone (NBZ). Refer to Section 2.3, "Suitable Backfill Soil," of this Comment Response Document (CRD) for further discussion of the responsibilities and actions necessary to identify a backfill source.
- 1-3 Because no source for backfill has been identified at this time, the need to evaluate impacts at backfill source locations has not been determined. After DOE and DTSC agree on a location (or multiple locations) for backfill material, DOE would evaluate whether additional National Environmental Policy Act (NEPA) analysis will be required.
- 1-4 Noise generated by engine braking, also known as "Jake Brake[®]" or "engine compression braking" is discussed in Chapter 3, Section 3.7.3, Chapter 4, Section 4.7.1.2, and Chapter 6 of this Final EIS. Chapter 3, Section 3.7.3 indicates that SSFL trucks currently operating on the haul routes generate between 80 and 95 dBA [decibels A-weighted] with the loudest noise levels associated with engine braking. Chapter 4, Section 4.7.1.2 acknowledges that the use of engine braking would continue under the Proposed Action, with individual SSFL truck pass-by events generating noise levels similar to those currently generated. In Chapter 6, Table 6-1, DOE indicates that, in order to minimize impacts, trucks will limit the use of engine compression braking on Woolsey Canyon Road and in neighborhoods to the extent practicable, consistent with the safe operation of heavy-duty trucks (e.g, avoiding overheating of brakes). Table 6-1 also states that all SSFL trucks are required to be equipped with properly operating mufflers. Although mufflers do not eliminate the signature staccato sound pattern of truck engine braking, they greatly reduce the sound level relative to vehicles whose mufflers have been removed (also known as "straight stacks").
- 1-5 DOE acknowledges that archaeological sites could be present beneath existing foundations, subsurface vaults, or concrete slabs. A National Historic Preservation Act (NHPA) Section 106 Programmatic Agreement is being developed by DOE through formal and informal consultation with the State Historic Preservation Officer, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes. This NHPA Section 106 Programmatic Agreement will establish

Commenter No. 1 (cont'd): Michael W. Kuhn, PhD,
SSFL Community Advisory Group

demolition and removal the historical landscape should be conducted with the presence of archaeological monitors.

P. 71, Aesthetics: This discussion assumes that suitable replacement material will be available. If none is available, a "moonscape" would be created. If excavated areas are partially filled with crushed rock, the visual damage to site would be substantial.

P. 81, last paragraph: States that finding of previously unidentified archaeological resources is "unlikely." I can assure you, from my own years of experience, if archaeological monitors are employed and are allowed to do their work, new sites will be identified. (See comments from p. 55.) If you examine the recordings done for the last three "Phase I" archaeological surveys done in Area LV, you will note that new sites were identified with each survey.

I have two final concerns:

1. The "cleanup to background or detection" based upon point by point cleanup, rather than the averaging standard used by the U. S. Environment Protection Agency will result in much greater removal of soil and subsoil without any appreciable health benefits to future users of the site.
2. The use of the "Look Up Table" standards will result in many "false positive" errors. With more than 100 chemicals listed and several radionuclides, the potential for false positives will result in far more soil being removed than if there was no possibility of false positive readings. The likelihood of 3-5 percent false positives for any chemical pretty much assures that any soil sample will have more than one false positive reading.

Sincerely,



Michael W. Kuhn, member
Santa Susana Field Laboratory Community Advisory Group

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procedures for making eligibility determinations on unevaluated sites, as needed, and inadvertent discoveries, along with procedures to assess effects and resolve adverse effects if they are determined eligible for the NRHP. This Programmatic Agreement will be legally binding and will be available to the public once finalized.

DOE agrees with the comment and during soil remediation will work to avoid a "moonscape" appearance (i.e., a rocky, barren landscape) of Area IV. DOE does not intend on removing soil until a suitable backfill material is identified.

The Cleanup to AOC LUT Values Alternative for soil remediation described in Chapter 2, Section 2.3.2, of this Final EIS (covering a soil cleanup that removes contaminants in concentrations above background levels or above levels determined by detection capabilities) was developed to implement the technical elements of the 2010 AOC. The 2010 AOC includes the following: "Residual concentrations 'not to exceed' local background concentrations i.e., if during site survey efforts or during confirmatory sampling the level of any constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above local background will not be averaged with other soil" (DTSC 2010). While the Cleanup to Revised LUT Values Alternative would continue to apply cleanup criteria on a point-by-point basis, the Conservation of Natural Resources Alternative (both the Residential Scenario and the Open Space Scenario) would apply a traditional risk-assessment approach to making cleanup decisions, including using area averaging (over approximately 2.5 acre areas) to determine concentrations and developing risk and dose criteria. However, to implement either of these alternatives, a change to the 2010 AOC would be required.

DOE acknowledges the commenter's concern. As discussed in the Summary, page S-26, of this EIS, DTSC has set an acceptable error rate in sample analysis at 5 percent. Compounding a 5 percent error rate over 132 different potential constituents in each sample means a much greater chance that DOE would be remediating clean soil, not contaminated soil. DOE is also evaluating, for comparison, two other soil alternatives: (1) Cleanup to Revised LUT Values Alternative and (2) Conservation of Natural Resources Alternative (two scenarios). While the Cleanup to Revised LUT Values Alternative would continue to apply cleanup criteria on a point-by-point basis, the Conservation of Natural Resources Alternative would apply a traditional risk-assessment approach to making cleanup decisions, including using area averaging (over approximately 2.5 acre areas) to determine concentrations and developing risk and dose criteria. However, to implement either of these alternatives, a change to the 2010 AOC would be required.

Commenter No. 2: Amy Pelayo

-----Original Message-----

Sent: Tuesday, February 07, 2017 6:58 AM
To: Jennings, Stephanie
Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV EIS Stephanie Jennings
stephanie.jennings@emcbc.doe.gov

Dear Ms. Jennings:

I am outraged by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

DOE's DEIS makes it abundantly clear that DOE wants to break out of its commitment to clean up all of its contamination at SSFL. Instead, DOE proposes leaving between 34% and 94% of the dangerous radionuclides and toxic chemicals on site, not cleaned up, where they will continue to migrate and put nearby communities at risk. That is unacceptable!

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation, all of which are prohibited under the AOC. Any "leave in place" cleanup methods, including natural attenuation and "no action" and should not be considered.

DOE also fails to acknowledge that the AOC is a legally binding agreement with the DTSC, and DTSC as the regulator makes the cleanup decisions, not DOE. The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the state toxics agency is the regulator who decides cleanup requirements for the toxic chemicals. That isn't within the power of the polluter, DOE. DOE should withdraw the EIS, as it violates cleanup commitments and DOE has no legal authority to decide the cleanup in the first place.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will be at increased risk of cancer and illnesses related to exposure to SSFL contaminants. I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

Sincerely,

Amy Pelayo

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2-1 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine soil cleanup levels. Use of risk-based criteria for soil cleanup is consistent with the approach used by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by U.S. Environmental Protection Agency (EPA) at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information regarding the technical components of the Cleanup to the AOC Lookup Table alternative. Section 2.2 also presents the soil volumes that would be left on site under each alternative. Under all of the action alternatives concentrations of chemicals or radionuclides would be reduced to levels that would be protective of human health and the environment for the intended use of the site as open space (please see Section 2.5 "Toxicity of Soil Contaminants" of this CRD for further information).

The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

2-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3, of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ. In accordance with the 2010 AOC, Chapter 7, Section 7.11, "Compliance with Applicable Laws and Regulations," all actions taken by DOE pursuant to the order will be undertaken in accordance with applicable local, State, and Federal laws and regulations. This clause recognizes that DOE must comply with NEPA, as do Sections 6.1 and 6.2 of the AOC. Section 6.1 acknowledges DOE's

Commenter No. 2 (cont'd): Amy Pelayo

obligation to prepare an EIS and ROD pursuant to a court order. Section 6.2 recognizes the need to complete an environmental review that meets the requirements of the court order.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(S) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under the California Environmental Quality Act (CEQA) that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. The Area IV and NBZ site cleanup activities covered by this Final EIS would begin following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

2-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 3: Tessa Mykel

From: Tessa Mykel [REDACTED]
Sent: Thursday, January 19, 2017 12:03 PM
To: Jennings, Stephanie [REDACTED]
Subject: DOE Draft EIS

Dear Ms Jennings,

I am troubled by the Draft EIS. The DOE should uphold the 2010 AOC to ensure a proper cleanup. I am also troubled by the phrasing in the Draft EIS regarding public comments. The document indicates that one can mail comments or submit them online, but cannot email comments. This makes it seem like the DOE is intentionally making it difficult for people to submit comments as email is a much easier, quicker and more efficient way for people to communicate with one another. I urge you to accept comments via email for this feedback process to be truly transparent and for the public to easily comment.

Thank you,
Tessa Mykel

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- 3-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.
- 3-2 Thank you for the feedback on the *Draft SSFL Area IV EIS*. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comments. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 4: Matt Ruhland

-----Original Message-----

From: Matt Ruhland [REDACTED]
Sent: Tuesday, January 17, 2017 6:12 PM
To: Jennings, Stephanie
Subject: Santa Susana EIS draft

Ms. Jennings

After reading the Environmental Impact Statement draft that was recently posted, I'm troubled by the proposal to drastically reduce the extent of the cleanup that was supposed to be completed by 2017. My family is lives in an area affected by this pollution, and the community has already begun to feel the effects. I believe that the DOE should uphold the 2010 cleanup agreement standards and accelerate the cleanup as much as possible, since the previous deadline was blatantly missed. I'm also very troubled by the fact that that you're not accepting email comments about the impact statement. Many that may want to comment will be impeded by the requirements to mail physical letter or sign up on the website.

Thank you for your time,

Matt Ruhland



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4-1 DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information, including necessary steps prior to continuing cleanup. The purpose of the EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," for a discussion of soil remediation alternatives. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act

4-2 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 5: Sonia Schendel

From: Sonia Schendel [REDACTED]
Sent: Wednesday, January 18, 2017 7:12 PM
To: Jennings, Stephanie
Subject: DEIS comments

Dear Ms. Jennings,

I have seen the post mail address and website for sending in comments about the Draft Environmental Impact Statement for Remediation of Area IV, and I have some concerns.

First off I believe that the DOE should uphold the 2010 AOC, and I know that many would agree with me.

Which is why it is crucial that comments be made accessible through email as well as post mail and the website to any community members who want to make a comment.

Thank you,

Sonia

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5-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

5-2 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 6: Kiryl Karpiuk

From: Kiryl Karpiuk [REDACTED]
Sent: Thursday, January 19, 2017 3:52 PM
To: Jennings, Stephanie
Subject: SSFL public comment request

Dear Ms. Jennings,

You are getting this email because there does not seem to be an email address for public comment regarding the Draft Environmental Impact Statement (EIS) for Santa Susana.

I would like to stress how important it is not only for me, but for the communities who live around the Santa Susana Field Laboratory, that the DOE follow through with the cleanup plan it agreed to in the 2010 AOC.

The problem is that this does not count as an official comment. I would like to request that the DOE create an official email address for the submission of public comments, and not just take comments submitted through the website and postal mail. This makes it seem like the DOE is deliberately trying to avoid public comment on the Draft EIS by not making it as easy as possible for the community to submit feedback.

I look forward to your response regarding this issue.

Thank you in advance,
Kiryl K.



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DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

6-2

6-2

All comments received by DOE during the public comment period were considered as part of the revisions to the Draft EIS, irrespective of how DOE received the comment. This includes your comment. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments, including this one, equally when developing this Final EIS.

Commenter No. 7: Garima

From: Garima [REDACTED]
Sent: Tuesday, January 17, 2017 3:47 PM
To: Jennings, Stephanie
Subject: Public Comments

Dear Ms. Jennings,

My name is Garima and I feel highly about the lack of clean up in Santa Susanna. People are getting sick because the clean up that should have already been done by 2017 is not complete.

I believe that the DOE should continue the Administrative Order on Consent 2010 to complete the clean up of this site in order to protect the lives of those who live there.

I would also like to ask that you take public comments by email because the public should be allowed to easily comment on this issue facing the community and today, many people have access to emailing.

Thanks and have a great day,

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7-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Please refer to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup activities covered by this EIS can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with the CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC will also need to approve DOE’s soil remediation, groundwater cleanup, and facility closure plans (see Section 1.5, “Next Steps,” of this CRD) before cleanup activities can start. DOE will work closely with DTSC to ensure initiation of cleanup starts as early as possible.

7-2 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

7-3 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 8: Maria Caine

From: [REDACTED]
Sent: Wednesday, January 18, 2017 10:24 AM
To: Jennings, Stephanie
Subject: Public Comment Questions

Ms. Jennings,

I am writing to you because of my concerns regarding the Santa Susana Field Laboratory. I was relieved to hear in 2010 that the site would be cleaned up, and am deeply saddened to find out the Department of Energy is no longer planning to uphold the AOC.

It is my belief that the DOE should uphold this agreement, not only for the people who currently live near the site, but because of the precedent it will set for cleanup of other contaminated sites in our state and country. Do not allow the draft EIS to work as an excuse to break your promise. Please uphold the AOC and clean up the site as was promised almost seven years ago.

I would also like to add that formal comments to the EIS should be allowed through email. It is common nowadays for people to have email, and have access to emails via laptop, cellphone, and a great number of other devices. Emails, while more convenient than formal letter mail, should hold no less merit when it comes to public comments. I ask that you accept comments through emails for the sake of receiving comments from all interested parties and stakeholders.

Thank you so much for your time and your hard work regarding the SSFL.
Best,
Maria Caine
Sent from Mail for Windows 10

8-1

8-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including information on the steps necessary prior to DOE making a decision on alternatives for cleanup of Area IV and the NBZ.

8-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

8-2

Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 9: Dallas Clark

From: Dallas Clark [REDACTED]
Sent: Thursday, January 19, 2017 1:13 PM
To: Jennings, Stephanie
Subject: Request for Public Comment

Dear Stephanie Jennings,

I would like to issue a complaint about the public's ability to comment on the Draft EIS for Santa Susana. Failing to clean up the site to the standards of the 2010 AOC is not only breaching the agreement but directly threatening the safety of the public. When people realize that they are being endangered they should have the easy ability to comment on plans that will affect the public via email. Forcing them to struggle through a complicated webpage will mean losing comments which it seems to me is the goal of the DOE. It is the DOE's responsibility as a government entity to listen to the public and protect them.

Thank You,
Dallas

9-1

9-2

9-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

9-2 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 10: Bradley Visacki

From: BRAD VISACKI [REDACTED]
Sent: Tuesday, January 17, 2017 4:02 PM
To: Jennings, Stephanie
Subject: Public comments on EIS

To whom it may concern,

It has come to my attention that the *Draft SSFL Area IV EIS* has violated commitment by breaking the 2010 Clean-up Agreement in Santa Susana. I feel it utterly unnecessary and archaic that comments concerning the matter must be submitted directly to you via U.S. mail, but you will not allow us to submit them to you via email. This appears to be intended as an impediment to comment on an urgent matter. Please consider revising your public comment policy, and allow the public to email directly to you.

Regards,
Bradley Visacki

|| 10-1
|| 10-2

10-1 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

10-2 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 11: Gabriel Sanchez

From: Gabriel Sanchez [REDACTED]
Sent: Wednesday, January 18, 2017 5:28 PM
To: Jennings, Stephanie
Subject: EIS Concerns

Hello Stephanie,

I am emailing you because I have been informed that according to your environmental impact statement (EIS), the radiation exposure at the Santa Susana field laboratory will not be cleaned up as promised. I have also noticed that the EIS does offer another alternative for cleaning up the pollution, however it does not meet the standards of the original clean up plan. This raises my concerns about the local communities around the area and their safety.

The public should also be allowed to make comments on this issue via email. This makes it easier for the public to input their opinion on what's going on in the community

Thank you for your time,
Gabe S.

11-1

11-1

DOE notes that you have been misinformed regarding the content of this EIS. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that would incorporate the technical elements (including for radioactive constituents) of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) It also evaluates two other cleanup alternatives. Under one, radioactive constituents would be cleaned up the same as under the 2010 AOC. The other alternative considers risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

11-2

11-2

Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 12: Joshua Osborne

-----Original Message-----

From: Joshua Osborne [REDACTED]
Sent: Thursday, January 19, 2017 1:29 PM
To: Jennings, Stephanie [REDACTED]

Subject: Comment System for EIS Draft

Ms. Jennings,

Will you accept email comments regarding the draft EIS that appears to break the cleanup agreement? It concerns me that the document states we can mail in comments to you at 4100 Guardian Street, Suite 160 in Simi Valley, CA 93063 at the U.S. Department of Energy, but no option is given to send in email responses. In today's age, many more citizens have access and available time to send an email over a written letter than must be sent with paid postage. If your department is seriously looking for feedback, the process of comment submission should be significantly more transparent.

I see a grave precedent set when a government seems to make it difficult to respond and comment on the status of an agreement that seems to be broken. It is my understanding that the DOE does not have any current plans or statements regarding legitimate intention to the cleanup of the SSFL area that was previously promised. It seems as though they no longer intend to cleanup as competently or as completely as previously promised in the Administrative Order on Consent established in 2010 and is honestly appalling that cleanup has yet to be even started.

Please return an answer ASAP so that my community has adequate time to review and comment on the DOE's retraction of their 2010 cleanup promise.

Sincerely,
A concerned citizen

From: Joshua Osborne [REDACTED]
Sent: Tuesday, February 07, 2017 3:44 PM
To: Jennings, Stephanie
Subject: Re: Comment System for EIS Draft

Ms. Jennings,

I appreciate the response. It's my understanding with the oral comments that we are to only receive 3 minutes and there is no guarantee that persons who are interested in commenting in person will be given the time to due so since many people can appear to comment. I also noticed that the online comments on the website limit comments to a certain number of characters and even the submission of documents only allows a certain size. I do see that the attached document size has now been increased from 5MB to 25MB which is an improvement. However, it seems dismaying that public comment is still being requested in outdated methods that limit response pools.

I also was informed there was an email opened to the public for comment submission. This made me rather excited as I felt my comments were being heard. However, when I tried submitting an email to ssfl_doe_eis@emchc.doe.gov, all I received was a response saying the email was no longer active. Since I have reputable sources showing evidence of their successful submission, I am rather disappointed that this method of submission has been retracted and is no longer available to the public. It seems as a deliberate act on the authority of the DOE to limit the amount of comment submissions and to quell groups of concerned citizens as their main means of comment have now been closed. Will the DOE be reopening this email address? Does the DOE respond with a confirmation to submissions via physical mail? As of right now, physical mail seems to be the only way to send in uninhibited responses for comments despite not receiving confirmation on submission or receipt.

I appreciate your responses and it is good to hear from the agency in regards to their efforts to work in the public interests. Thank you for your time and I look forward to your response.

Joshua Osborne

12-1

12-1

Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. Multiple means of submitting comments were available. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE's time limit on oral comments at the public hearings was set to allow all stakeholders equal time to present their comments. DOE also accepted comments by U.S. mail, but DOE does not respond with a confirmation to submissions via U.S. mail. Regardless of the submission method, which included an older e-mail address discussed below, DOE considered all comments equally when developing this Final EIS.

12-2

12-1
cont'd

DOE apologizes for the confusion over the older email address. The email address was previously created for scoping comments, it was not intended for comments on the Draft EIS and DOE did not identify it as a means to submit such comments. The email address was discontinued when DOE realized stakeholders had begun to use it for comments on the Draft EIS. In order to better track comments, DOE had determined the website was the best method for electronic comments. Comments received at this older e-mail address before it was discontinued were considered equally with all other submitted comments.

12-1
cont'd

12-2

DOE remains committed to cleaning up Area IV and the NBZ in a manner that is protective of human health and the environment. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information, including information on the necessary steps prior to DOE making a decision on alternatives for cleanup of Area IV and the NBZ. Section 2.2 specifically addresses cleanup in accordance with the 2010 AOC.

**Commenter No. 13: Pat Tumamait,
Barbereño/Ventureño Band of Mission Indians**

**DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND
THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY**

PUBLIC HEARING COMMENT FORM

PLEASE PRINT LEGIBLY

Location: SSFL Date: 2-17-17

- ① I would like to see a overlay map of the Arch sites versus the contaminated areas slated for removal.
- ② I would like to see when the removal of the soils begin that the area is completed before moving on to another part of the site, because the animals need the space to inhabit w/out further disturbance.
- ③ I would like to see sample testing done during the excavation at depth of impact, for evaluation.

13-1

13-2

13-3

13-1 Archaeological location information is maintained as confidential in order to protect the integrity of archaeological sites, and is not available to the public. This information has been presented to you as one of the Native American consulting parties (e.g., the Santa Susana Field Laboratory Sacred Sites Council [SSFL Sacred Sites Council], an organization of Native Americans with historical ties to SSFL land). These consulting parties were required to sign a non-disclosure agreement with DOE before being given access to this information.

13-2 The cleanup would likely take place in stages, leaving some areas relatively intact while other areas are remediated. DOE acknowledges that despite best efforts, soil removal and other remediation activities may leave large areas severely disturbed during cleanup activities. To the extent feasible, restoration will begin as soon as practical as the remediation activities are finished. Furthermore, the proposed cleanup activities would be conducted in a manner that would minimize impacts to biological resources. See Chapter 6 of this EIS for a discussion of minimization measures and potential mitigations. Numerous measures to minimize impacts have been included to protect plant and wildlife species, including several measures aimed at minimizing the removal of existing vegetation during remediation. For example, as stated in minimization measure 5-2 (Sensitive habitats) steps would be taken to "Avoid and minimize disturbance to sensitive upland vegetation, including Ventura coastal sage scrub, dip slope grassland, sandstone outcrops, unburned northern mixed chaparral, sandstone outcrops/northern mixed chaparral, California walnut woodland, and riparian and coast live oak woodland and savanna." Measures associate with minimization measure 5-2 include: a) Design final project to avoid or minimize impacts to sensitive native habitats by reducing disturbance and b) Restore sensitive habitats that are temporarily disturbed as a result of project implementation to pre-project conditions as soon as possible to prevent net loss of habitat. Areas that cannot be restored within a short period of time (long-term impact) or are permanently impacted by project activities may require additional mitigations incorporated into the project design to compensate for temporary or permanent loss of sensitive habitats. Furthermore, revegetation of disturbed areas would be initiated the first fall after completion of final grading activities and before the winter rainfall season to minimize the need for watering and encourage early establishment of plants to reduce the potential for erosion associated with rain events.

13-3 As required in Section 2.12 of the 2010 AOC, confirmation sampling to demonstrate cleanup standards have been met will be performed at the bottoms and sides of the excavations.

**** CONTINUE ON BACK FOR MORE SPACE ****

Name: Pat Tumamait

Organization: Barbereño, Ventureño Band

- Yes, include my name and address on the mailing list so I can receive information on the EIS. No, do not include my name and address on the mailing list.
- If you provide your name, it will appear along with your comment in the Final EIS unless you request otherwise. If you do not want your name included with your comment in the Final EIS, please check here.

Please turn in this form at the meeting or mail by March 14, 2017, to:
Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS,
U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063
Or submit comments via our website: www.SSFLAreaIVEIS.com

Commenter No. 14: Bruce M. Rowe,
Emeritus Professor of Anthropology/Los Angeles Pierce College/
NASA SSFL Consulting Party/DOE Consulting Party

To: Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS, U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063.

Re: Draft Environmental Impact Statement (EIS) for cleanup of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

I believe that the site should be cleaned up on a risk based standard that protects human health and protects the environment. Protecting the environment is important to long term human health and environmental sustainability.

Risk must be determined based on scientific studies, not anecdotal correlations. Most epidemiological studies have shown that there is minimal to no off-site risk from the SSFL site. On site risk is limited to certain area of the site and ground water pollution. These risks should be abated by logical and scientifically sound methods.

As tragic as the illness of a child or adult is, anecdotal conclusions that a particular illness is caused by a particular environment cause are of no scientific use except as a starting point for a scientific study to see if the correlation involves causation. In my opinion, such studies have so far failed to show causation between pollutants at the SSFL site and increased risk of cancers or other illnesses off site.

Public opinion also should not drive public health policy. The "many" are not always informed or qualified to make decisions on scientific issues. If a majority of people think that manmade climate change is not happening, that does not mean that it is not happening. Climate scientists, who are a small percentage of the total population are better able to make that conclusion. In the same way, epidemiologists, chemists, and public health professions are better at evaluating health risk than the general population.

In conclusion, I believe that the site should be cleaned up using balancing criteria that protects human health and takes into consideration what the end use of the site will be in that analysis. I also believe that it would be tragic to apply the most stringent cleanup standard and thereby destroy a rare open space setting in this city, a space that acts as a wildlife corridor while gaining no known health benefit. It would also be a tragedy to lose cultural resources through the destruction of archeological sites, many of which might not have been discovered to date. The dust released into the air, the pollutants from truck, the potential disruption of water shed, and other factors, might lead to an increased off site health risk.

I believe for a lot of people the "smoke detector effect" is illustrated by the belief that the site needs to be cleaned up to the most stringent standards possible. Smoke detectors often go off when there is no fire. Cleaning the site up to detect levels might be a similar over reaction, that will be more harmful than beneficial.

Bruce M. Rowe
Emeritus Professor of Anthropology
Los Angeles Pierce College
NASA SSFL Consulting Party
DOE Consulting Party

14-1

14-1

DOE acknowledges your support for a risk-based standard that protects human health and protects the environment. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

14-2

14-2

DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. DOE's evaluation of the potential human health impacts is based on established, scientifically accepted risk-assessment practices. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

14-1
cont'd

Commenter No. 15: Raymond J. Bishop

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY

PUBLIC HEARING COMMENT FORM

PLEASE PRINT LEGIBLY

Location: Van Nuys Date: 2/20/17

I metted Rocketdyne under Congressman
Celeste Jones in about 1998.

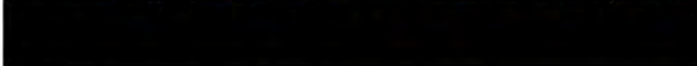
I served as the CFO + COO of
ADVANCE an economic development
501-C.3. we had a contract
with DOE over three years.

We were assured by Rocketdyne
executives that no
contamination existed
at the site.

My wife and I lived in
Woodland Hills - she developed cancer
what we were told was false.

Name: Raymond J Bishop *this site needs to be cleaned up*

Organization: Chair, Business + Professional Caucus, CDP



- Yes, include my name and address on the mailing list so I can receive information on the EIS.
- No, do not include my name and address on the mailing list.
- If you provide your name, it will appear along with your comment in the Final EIS unless you request otherwise. If you do not want your name included with your comment in the Final EIS, please check here.

Please turn in this form at the meeting or mail by March 14, 2017, to:
Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS,
U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063
Or submit comments via our website: www.SSFLAreaIV.EIS.com

15-1
15-2

15-1 DOE acknowledges that there are chemical and radioactive constituents above background levels in parts of that portion of SSFL for which it is responsible, Area IV and the NBZ. See Chapter 3, Section 3.9, of this Final EIS for information on chemical and radioactive constituents in Area IV and the NBZ. DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of the site for which it is responsible. Please refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

15-2 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Section 3 - Public Comments and DOE Responses

Commenter No. 16: Joan C. Edwards

hearing Feb 21 Thu + Feb 18 Sat

WWW.SSFLAREAIV.EIS.COM

Energy Dept. Contaminated Hot Site - Melissa Simon
Building Cleanup Action Jan 26, 2017 by

Please include comments

Draft EIS released Jan 6, 2017

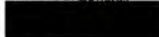
1. Demolish 18 structures in Area IV
2. Remediate contaminated soil
 - remove, provide dust prevention, & chemical fixative
 - advertise routes for removal
 - let public know entire route, from clean-up site to the disposal repository site.
 - let public know the level of radioactivity contained: ex. low-level, high-level
3. Remediate the groundwater.
 - latest technology for treating groundwater as it will continue to seep ^{plumes} into the soil
 - testing wells will not suffice.

DOE should be responsible for the entire cleanup. Boeing bought the Rocketdyne Site, & probably had no idea ~~that~~ of the N-meltdown in the 1950s.

- SSFL must be returned to safe background standards. All detectable contamination needs to be eliminated now.



Ms. Joan C. Edwards



16-1

DOE acknowledges your support for demolishing the 18 DOE structures in Area IV, an activity that would be accomplished under the Building Removal Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

16-2

DOE acknowledges your concern about SSFL remediation. Please see the response to comment 16-1. During remediation, DOE will employ best management practices. For example, best management practices include water sprays and chemical fixatives to minimize the generation of dust. DOE will also be operating an air monitoring network to detect whether adequate control of dust is being maintained. (DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017[.]) Regarding transportation routes, please refer to Chapter 3, Sections 3.8.2 and 3.8.3, which show the entire transportation routes from SSFL to the evaluated disposal facilities. Because much of the radioactive contamination at Area IV was previously remediated, soil removed under any of the action alternatives would contain low levels of radioactive material. All radioactive waste from cleanup activities would be transported to licensed offsite disposal facilities in compliance with U.S. Department of Transportation requirements.

16-3

DOE acknowledges your concern about the use of the latest technology for treating groundwater. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. The alternatives include those for remediating contaminated groundwater. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

16-4

As discussed in Chapter 1, Section 1.3, of this EIS, there are multiple parties with responsibilities at SSFL. This EIS is evaluating the potential environmental impacts associated with remediation of that portion of SSFL for which DOE has cleanup responsibility, that is, Area IV, the location of DOE's Energy Technology Engineering Center, and the NBZ. The Sodium Reactor Experiment, site of the 1959 accident, was located at the Energy Technology Engineering Center. The reactor accident was known and information was readily available in 1996 when Boeing purchased the Rockwell International Corporation interests at SSFL. NASA and Boeing are responsible for remediating portions of SSFL that historically were used for non-DOE activities.

16-5

NASA is responsible for cleanup of Area II, a portion of Area I, and portions of the NBZ impacted by its operations. Boeing is responsible for cleanup of Areas I and III and for demolition of 4 buildings in Area IV that it owns.

Commenter No. 16 (cont'd): Joan C. Edwards

- 16-5 DOE acknowledges your concern about remediation of SSFL in a manner that returns the site to safe background standards with the elimination of all detectable contamination. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Following the soil removal actions, all action alternatives evaluated in this EIS would leave soil with contaminant levels protective of human health and the environment based on a future open space land use. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

**Commenter No. 17: Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

**Fernandeño Tataviam Band of Mission Indians
Sovereign Indian Nation**



Rudy J. Ortega Jr.
Tribal President

March 2, 2017

Stephanie Jennings
NEPA Document Manager, SSFL Area IV DEIS
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

E-mail: stephanie.jennings@emcbc.doe.gov

RE: Santa Susana Field Laboratory (SSFL) Area IV and Northern Buffer Zone DEIS

Dear Ms. Jennings:

I am the Tribal Chairman of the Fernandeño Tataviam Band of Mission Indians (FTB). I thank you and DOE for the opportunity to provide comments on the DOE Draft EIS. DOE is covered by Executive Order 13175 as reaffirmed by that Presidential Memorandum on Tribal Coordination dated November 5, 2009 that reaffirmed [Executive Order 13175](#), "Consultation and Coordination with Indian Tribal Governments," and emphasized the importance of strengthening government-to-government relationships with Native American tribes.

In addition, DOE is an original signatory to that MOU REGARDING INTERAGENCY COORDINATION AND COLLABORATION FOR THE PROTECTION OF INDIAN SACRED SITES (2012) and the **Action Plan to Implement the Memorandum of Understanding (MOU) Regarding Interagency Coordination and Collaboration for the Protection of Indian Sacred Sites dated March 5, 2013**. I believe the MOU and Action Plan should be applied to the SSFL site to engage DOE and Interior as signers to the MOU and the National Park Service as part of Interior. I hereby requests that DTSC be added as a Non-federal Partner under Section IV(9).

REQUEST FOR EXTENSION OF TIME TO COMMENT: I am informed that others have requested an additional thirty (30) days to comment and I make the same request.

Subject to my right to supplement, add to and modify them, I make the following DEIS comments:

1019 Second Street, San Fernando, California 91340
(818) 837-0794 | FAX (818) 837-0796 | www.tataviam-nsn.us

17-1

17-2

- 17-1 Indian sacred sites Traditional cultural resources are described in Chapter 3, Section 3.11, Appendix B, and Appendix F of the Final EIS. Note that the MOU referenced in the comment expired on December 31, 2017. DOE will continue to consult with the Santa Ynez Band of Chumash Indians on a government-to-government basis on an account of this Tribe's status as a federally recognized Tribe. Regarding the role of the Department of the Interior, National Park Service, DOE invited the NPS to participate in the Section 106 consultation for this undertaking, and the NPS is participating as a consulting party. Regarding the role of DTSC, DOE invited DTSC to participate in the Section 106 consultation for this undertaking, including participating in the development of the NHPA Section 106 Programmatic Agreement. DTSC declined to participate. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for information regarding the process that will be used to determine exemptions.
- 17-2 The 60-day public comment period began on January 13, 2017 and was scheduled to end on March 14, 2017. In response to requests from stakeholders on March 7, 2017, the public comment period was extended to April 13, 2017.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

FTB Comments – March 2 2017: 2

**(1) The EIS Must Address Cultural Resources (copied from
<http://www.npi.org/NEPA/impact>)**

Cultural resources are referred to in different ways at different points in the CEQ regulations. The regulatory definition of the term “human environment” at 40 CFR 1508.14 – impacts on the quality of the human environment being the subjects of any EIS – includes “the natural and physical environment and the relationship of people with that environment.” The definition of “effects” at 40 CFR 1508.8 – as in “effects on the quality of the human environment” – includes changes in the human environment that are “aesthetic, historic, cultural, economic, (or) social.”

The regulatory definition of the word “significantly” at 40 CFR 1508.27 – as in “major federal action significantly affecting the quality of the human environment” – includes as measures of impact intensity:

- Impacts on an area’s unique characteristics, such as “historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas” (40 CFR 1508.27(b)(3)).
- Impacts on “districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places” and on “significant scientific, cultural, or historical resources” (40 CFR 1508.27(b)(8)).

Clearly, impacts on cultural resources are to be addressed in an EIS. Note that it is not just impacts on historic properties that should be addressed. The regulations use “historic” and “cultural” in parallel, not as synonyms.

**(2) Record of Decision Must Mitigate any Impacts to Cultural Resources (copied from
<http://www.npi.org/NEPA/impact>)**

Once the EIS analysis has resulted in a draft environmental impact statement (DEIS), it is subjected to public and agency review, and comments are addressed – this may require further analysis. Then, assuming the project has not been abandoned, or so changed that a supplemental DEIS is needed, a final EIS (FEIS) is prepared and published. The FEIS is considered in making the agency’s decision about whether and how to proceed with the action that was the subject of the EIS. This decision is recorded in a Record of Decision (ROD). According to 40 CFR 1505.2, the ROD must:

- State what the decision was.
- Identify all alternatives considered.
- Specify the alternative or alternatives considered to be “environmentally preferable.” (Note that the agency does not have to select the environmentally preferable alternative, but it does have to discuss what it is.)
- Identify and discuss the factors balanced in making the decision (whether for or against the environmentally preferable alternative).
- State whether “all practicable means to avoid or minimize environmental harm . . . have

17-3

17-3

As described in Chapter 3, Section 3.11.1, of this EIS, DOE defines cultural resources for the purposes of impact analysis broadly to encompass definitions of cultural resources in NEPA and the CEQ NEPA implementing regulations (see Chapter 3, Section 3.11.1, including the text box titled “Types of Cultural Resources”). Impacts on this broadly defined category of resources are addressed in Chapter 4, Section 4.11, of this EIS. Proposed methods to avoid, minimize, or mitigate impacts are described in Chapter 6, Sections 6.1 and 6.2.

17-4

17-4

As required by CEQ’s and DOE’s NEPA implementing regulations, DOE will describe the proposed alternatives, announce its decisions, and discuss any adverse impacts and mitigating actions in the Record of Decision for this Final EIS. The Record of Decision will also discuss the Section 106 Programmatic Agreement being developed in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties.

Commenter No. 17 (cont'd): Rudy Ortega, Tribal President, Fernandeño Tataviam Band of Mission Indians

FTB Comments – March 2 2017: 3

been adopted, and if not, why they were not.”

Having notified the world of its decision, the agency implements it. In doing so, it must carry out any mitigation, i.e., “means to avoid or minimize environmental harm,” it has said in the ROD or EIS that it will carry out (40 CFR 1505.3).

(3) Deferral of Mitigation does not Comply with NEPA (copied from <http://www.npi.org/NEPA/impact>)

Deferral. With respect to historic properties, a very common problem is “deferral,” in which the agency:

- Acknowledges that it does not know much about what effects there may be on historic properties (often because such properties have not yet been identified); but
- Says that whatever effects there may be, [NHPA Section 106 review](#) (of the National Historic Preservation Act), to be performed later, will take care of them; and
- Concludes that therefore, whatever alternative is decided on, impacts on historic properties will not be a problem.

Considering environmental impacts *after* a decision has been made defeats NEPA’s purpose of considering impacts in *preparing* to make decisions. It also almost guarantees last-minute conflicts between project implementation and historic preservation.

Failure to consider things that are not historic properties. With respect to other kinds of cultural resources, a common problem is that they are not considered at all. Historic properties, or even more narrowly, archeological sites, are sometimes the only things discussed in the “[cultural resource](#)” part of an EIS. If social impacts are considered, they are often considered only terms of easily quantifiable socioeconomic variables like population, employment, and use of public services. The result is that impacts on many classes of cultural resource simply are not identified or considered in deciding whether significant impacts may occur.

(4) Significant Negative Unmitigated Impacts to Sacred Sites and Cultural Resources by Soil Cleanup to Background:

Indian Sacred Site and Traditional Cultural Property: The Santa Ynez Band of Chumash Indians (Chumash Tribe) has already designated all of the NASA administered property as a sacred site under E.O. 13007. The Chumash Tribe has also made a similar EO 13007 designation for the areas leased to DOE.

Archeological Resources: The proposed cleanup of the Burro Flats site (CA-VEN-1072); could result in *significant, negative, local, and long-term* impacts to the site and would constitute an *adverse effect* under Section 106. The proposed cleanup of newly discovered and previously

17-4
cont'd

17-5

17-6

17-7

17-5 DOE has analyzed potential environmental impacts to cultural resources in this Final EIS. As described in Chapter 3, Section 3.11.2.3, and Appendix F, Section F.2, of this EIS, Area IV and the NBZ have been intensively surveyed for cultural resources with the intention of identifying cultural resources that may be impacted by the cleanup efforts. Potential impacts of the proposed alternatives are described in Chapter 4, Section 4.11, under each alternative, and summarized in Section 4.11.4. Proposed methods to avoid, minimize, or mitigate impacts are described in Chapter 6, Sections 6.1 and 6.2.

17-6 See response to comment 17-4 above.

17-7 Chapter 3, Section 3.11.2.3.4, Appendix B, and Appendix F of this Final EIS describes traditional cultural resources within the APE, including Indian sacred sites and traditional cultural properties. Measures provided in Chapter 6, Sections 6.1 and 6.2, and being developed through the NHPA Section 106 Programmatic Agreement, present DOE’s approach for addressing adverse effects on traditional cultural resources.

Site CA-VEN-1072 is a large, NRHP-eligible archaeological site with numerous components spread over a large area. Although DOE understands that sites can extend for long distances and may be related to each other, CA-VEN-1072 and its features, as defined in site records, appears to lie completely within Area II (La Monk 1953, Grant 1965; Knight 2001; see also Appendix F); which is outside of DOE’s area of responsibility. However, DOE acknowledges that NASA is developing a proposal for an NRHP-eligible Burro Flats Archaeological District to the California SHPO that includes several archaeological sites within DOE’s APE in Area IV, and the Santa Ynez Band of Chumash Indians is developing a proposal for an NRHP-eligible Simi Hills Archaeological District that includes all the recorded archaeological sites in DOE’s APE (including CA-VEN-1803). The NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will establish procedures for addressing adverse effects on historic properties, including any archaeological districts that are determined eligible for the NRHP.

See response to comment 17-2 above regarding efforts made to identify and evaluate cultural resources within the APE, including extended Phase I testing. The NHPA Section 106 Programmatic will establish procedures for making eligibility determinations on unevaluated sites, as needed, and inadvertent discoveries, along with procedures to assess effects and resolve adverse effects if they are determined eligible for the NRHP.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

FTB Comments – March 2 2017: 4

undiscovered archeological sites found to be NRHP-eligible could be a *significant, negative, local, and long-term* impact on archeological resources, thus resulting in a finding of *adverse effect* under Section 106.

Deferral of eligibility determination: A determination of eligibility all newly discovered archeological sites in consultation with the SHPO and the federally recognized tribes, needs to be completed before cleanup begin if any site is going to be affected by soil cleanup activities.

Deferral of boundary research as to VEN-1072 and VEN-1803: Additional boundary research on Area IV is required to conclude that any avoidance of excavation within the boundaries of Burro Flats (CA-VEN-1072) would diminish or eliminate adverse impacts to known archeological sites and reduce the impacts to *negligible, negative, local, and long term* and could result in a finding of *no adverse effect* under Section 106.

Deferral of additional testing as to unknown archaeological deposits: Additional subsurface testing is required to conclude that reducing the amount of excavation on newly discovered archeological deposits (commonly referred to as “inadvertent or accidental discoveries”) could minimize the impact if the newly identified sites were avoided, thus reducing the impacts to *minor, negative, local, and long-term* impacts from excavation.

(5) Failure to Address Executive Order 13007

On March 5, 2014, the Santa Ynez Band of Chumash Indians, a federally recognized tribe (“Chumash Tribe”), designated the DOE portion of the SSFL as an Indian sacred site pursuant to Executive Order 13007. This Indian sacred site also includes the former Rocketdyne and now Boeing portion of SSFL and the Chumash Tribe is open to discussing the exact boundaries at a later date.

E.O. 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites.

Sacred sites are defined in the executive order as “any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.” There is no review of such determinations by a Federal agency.

It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site. However, in those instances where an undertaking may affect a historic property that is also considered by an Indian tribe to be a sacred site, the Federal agency should, in the course of the Section 106 review process, consider accommodation of access to and ceremonial use of the property and avoidance of adverse physical effects in accordance with E.O. 13007.

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As discussed in Chapter 3, Section 3.11.2.3.4 of this Final EIS, the Santa Ynez Band of Chumash Indians filed paperwork nominating the entire SSFL to be included in the *State of California Native American Heritage Commission Sacred Lands Inventory* (NAHC 2014), and also notified DOE of its identification of a portion of SSFL as an Indian sacred site for consideration consistent with Executive Order 13007, *Indian Sacred Sites*. While DOE does not own property at Area IV or the NBZ, DOE is working with the Native American tribes with ties to the SSFL area to preserve the cultural resources and the sacred nature of Area IV and the NBZ.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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The Advisory Council on Historic Preservation (ACHP) has explained “**The Relationship Between Executive Order 13007 Regarding Indian Sacred Sites and Section 106,**” <http://www.achp.gov/eo13007-106.html>

To the extent that the requirements of the executive order and ACHP’s regulations are similar, Federal agencies can use the Section 106 review process to ensure that the requirements of E.O. 13007 are fulfilled. For example, E.O. 13007 requires that agencies contact Indian tribes regarding effects and the Section 106 regulations require consultation with Indian tribes to identify and resolve adverse effects to historic properties.

Consultation regarding the identification and evaluation of historic properties of religious and cultural significance to an Indian tribe could include identification of those properties that are also sacred sites. Similarly, consultation to address adverse effects to such historic properties/sacred sites could include discussions regarding access and ceremonial use.

(6) Failure to address the DOE Site is a Traditional Cultural Property (TCP) eligible for protection on the National Register:

National Register Bulletin No. 38 (hereinafter referred to as “NPS Bull. No. 38”), Guidelines for evaluating and Documenting Traditional Cultural Properties (1990; revised 1992; 1998) under NHPA <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb38.pdf>

A Locations for traditional ceremonies are defined as a TCP: NPS Bull No. 38, p. 1, provides:

The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include: ***

- a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice;

B Mountain tops and rock outcroppings like at SSFL are TCP’s: NPS Bull. No. 38, p. 2, provides:

Traditional cultural properties are often hard to recognize. A traditional ceremonial location may look like merely a mountaintop, a lake, or a stretch of river; a culturally important neighborhood may look like any other aggregation of houses, and an area where culturally important economic or artistic activities have been carried out may look like any other building, field of grass, or piece of forest in the area. As a result, such places may not necessarily come to light through the conduct of archeological, historical, or architectural surveys. The existence and significance of such locations often can be ascertained only through interviews with knowledgeable users of the area, or through other forms of ethnographic research.

C DOE must engage specialists as part of its TCP study: NPS Bull. No. 38, p. 10, provides:

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As discussed in Chapter 3, Section 3.11.2.3.4 of this Final EIS, DOE acknowledges that the Santa Ynez Band of Chumash Indians has identified the entire SSFL as a Native American sacred site (referred to as the Santa Susana Sacred Sites and Traditional Cultural Property). The Final EIS also acknowledges that additional efforts by NASA, the Santa Ynez Band of Chumash Indians, other tribes, and others may result in the designation of one or more NRHP-eligible traditional cultural properties that overlap with the APE. Measures provided in Chapter 6, Sections 6.1 and 6.2, and being developed through the NHPA Section 106 Programmatic Agreement, present DOE’s approach for addressing adverse effects on traditional cultural properties.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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In general, the only reasonably reliable way to resolve conflict among sources is to review a wide enough range of documentary data, and to interview a wide enough range of authorities to minimize the likelihood either of inadvertent bias or of being deliberately misled. Authorities consulted in most cases should include both knowledgeable parties within the group that may attribute cultural value to a property and appropriate specialists in ethnography, sociology, history, and other relevant disciplines.⁷

D Specific events like the Solstice ceremony at SSFL qualify as TCP: NPS Bull. No. 38, p. 11, provides:

For example, the National Register defines a “site” as “the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure.”⁹ Thus a property may be defined as a “site” as long as it was the location of a significant event or activity, regardless of whether the event or activity left any evidence of its occurrence.

A culturally significant natural landscape may be classified as a site, as may the specific location where significant traditional events, activities, or cultural observances have taken place. A natural object such as a tree or a rock outcrop may be an eligible object if it is associated with a significant tradition or use. A concentration, linkage, or continuity of such sites or objects, or of structures comprising a culturally significant entity, may be classified as a district.

E Native American ceremonies qualify as TCP: NPS Bull. No. 38, p.15, provides:

National Register guidelines stress the fact that properties can be listed in or determined eligible for the Register for their association with religious history, or with persons significant in religion, if such significance has “scholarly, secular recognition.”¹³ The integral relationship among traditional Native American culture, history, and religion is widely recognized in secular scholarship.¹⁴ Studies leading to the nomination of traditional cultural properties to the Register should have among their purposes the application of secular scholarship to the association of particular properties with broad patterns of traditional history and culture. The fact that traditional history and culture may be discussed in religious terms does not make it less historical or less significant to culture, nor does it make properties associated with traditional history and culture ineligible for inclusion in the National Register.

F Lack of use does not make a property TCP ineligible: NPS Bull. No. 38, p. 18, provides:

The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the Register. For example, assume that the Indian tribe referred to above used the mountain peak in prehistory for communication with the supernatural, but was forced to abandon such use when it was confined to a distant reservation, or when its members were converted to Christianity. Assume further that a revitalization of traditional religion has begun in the last decade, and as a result the peak is again being used for vision quests similar to those carried out there in prehistory. The fact that the contemporary use of the peak has little continuous time depth does not make the peak ineligible; the peak’s association with the traditional activity reflected in its contemporary use is

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**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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what must be considered in determining eligibility.

(7) Traditional Cultural Landscapes must also be included in Section 106 consultations and the EIS

Traditional cultural landscapes, because they are often a property type such as a district or site, are identified in the same manner in the Section 106 process as other types of historic properties of religious and cultural significance to Indian tribes or Native Hawaiian organizations. The regulations at 36 CFR Section 800.4 outline several steps a federal agency must take to identify historic properties. In summary, to determine the scope of identification efforts, a federal agency, in consultation with the State Historic Preservation Officers (SHPO)/Tribal Historic Preservation Officer (THPO), must:

1. Determine and document the area of potential effect for its undertaking;
2. Review existing information; and,
3. Seek information from consulting parties including Indian tribes or Native Hawaiian organizations.

Based on the information gathered through these efforts, the federal agency, in consultation with the SHPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by the undertaking, develops and implements a strategy to identify historic properties within the area of potential effects. Identification efforts may include background research, oral history interviews, scientific analysis, and field investigations. <http://www.achp.gov/natl-qa.pdf>

There is no single defining feature or set of features that comprise a traditional cultural landscape. Such places could be comprised of natural features such as mountains, caves, plateaus, and outcroppings; water courses and bodies such as rivers, streams, lakes, bays, and inlets; views and view sheds from them, including the overlook or similar locations ; vegetation that contributes to its significance; and, manmade features including archaeological sites; buildings and structures; circulation features such as trails; land use patterns; evidence of cultural traditions, such as petroglyphs and evidence of burial practices; and markers or monuments, such as cairns, sleeping circles, and geoglyphs. <http://www.achp.gov/natl-qa.pdf>

Based on such research, the ACHP TRADITIONAL CULTURAL LANDSCAPES ACTION PLAN advises as follows:

The ACHP, as the agency with responsibility for overseeing the Section 106 review process, and DOI, through the National Park Service (NPS), as the agency with responsibility for overseeing the National Register of Historic places, should provide leadership in addressing Native American cultural landscapes in the national historic preservation program. Together, the ACHP and NPS should:

--Promote the recognition and protection of Native American traditional cultural landscapes both within the federal government and the historic preservation community as well as at the state and local levels, and,

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DOE has not been provided information relating to any specific, stand-alone traditional cultural landscapes on DOE's portion of SSFL. However, Chapter 4, Section 4.11 of this Final EIS describes how soil remediation would result in changes to the setting and general landscape (e.g, topography, soil color, vegetation) associated with traditional cultural resources at Area IV and the NBZ. DOE will continue to consult with the Santa Ynez Band of Chumash Indians on a government-to-government basis to consider their interests and concerns about the proposed cleanup.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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--Address the challenges of the consideration of these historic properties in the Section 106 review process as well as in NEPA reviews. <http://www.achp.gov/pdfs/native-american-traditional-cultural-landscapes-action-plan-11-23-2011.pdf>

(8) U.N. Declaration on the Rights of Indigenous Peoples must now be followed after December 2010

In December 2010, the United States announced support for the **United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)**. In announcing this support, President Obama stated: "The aspirations it affirms—including the respect for the institutions and rich cultures of Native peoples—are one we must always seek to fulfill...[W]hat matters far more than any resolution or declaration – are actions to match those words." The UNDRIP addresses indigenous peoples' rights to maintain culture and traditions (Article 11); and religious traditions, customs, and ceremonies (Article 12); to participate in decision making in matters which would affect their rights (Article 18); and to maintain spiritual connections to traditionally owned lands (Article 25).

The ACHP will now incorporate UNDRIP in the Section 106 review process:

While the Advisory Council on Historic Preservation's (ACHP) work already largely supports the United Nations Declaration on the Rights of Indigenous Peoples, additional and deliberate actions will be taken to more overtly support the Declaration. The Section 106 review process provides Indian tribes and Native Hawaiian organizations (NHOs) with a very important opportunity to influence federal decision making when properties of religious and cultural significance may be threatened by proposed federal actions. While federal agencies are required to consult with Indian tribes and NHOs and to take their comments into account in making decisions in the Section 106 review process, adding the principles of the Declaration to that consideration may assist federal agencies in making decisions that result in the protection of historic properties of religious and cultural significance to Indian tribes and NHOs. <http://www.achp.gov/docs/UN%20Declaration%20Plan%203-21-13.pdf>

(9) Official recognition in the EIS need to be made of the areas surrounding Burro Flats

While the Southern half of Area II contains the pictographs and additional 16 sites, Area IV of SSFL needs additional investigation, including, without limitation:

- a Geography—this areas contains numerous flat areas that would be suitable camp sites;
- b Areas of food—this areas contains forests and riparian areas that could be utilized in the gathering of food;
- c Support for ceremonial area in the Southern half of Area IV—It is not inconceivable that the Northern half of the SSFL site provided support for the ceremonies in the Southern half of SSFL;
- d Separate areas for different tribes—if SSFL was an inter-tribal gathering place, then each tribe would have congregated separately in different parts of the site.

(10) Subsurface testing is required.

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17-11 Thank you for bringing this to DOE's attention. DOE will continue to consult with the Santa Ynez Band of Chumash Indians on a government-to-government basis, as well as with other tribes with a demonstrated interest in the undertaking, regarding their interests and concerns about the proposed cleanup.

17-12 See response to comment 17-2 above regarding efforts made to identify cultural resources within the APE. In particular, Chapter 3, Section 3.11.2.3.2 of this Final EIS describes the Burro Flats Painted Cave site complex, and acknowledges that NASA is developing a proposal for an NRHP-eligible Burro Flats Archaeological District to the California SHPO that includes several archaeological sites within DOE's APE in Area IV. The NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will establish procedures for addressing adverse effects on historic properties, including the Burro Flats Archaeological District if it is determined eligible for the NRHP.

17-13 As described in Chapter 3, Section 3.11.2.3.2 and Appendix F, Section F.2.3, of this Final EIS, DOE developed and implemented an extended phase 1 testing program to evaluate the NRHP eligibility of 10 archaeological sites in the APE. The 10 sites were chosen based on: (1) the extent of the contamination known at the time the testing program was designed; (2) sites where NRHP eligibility was unclear; and (3) consultation with Native American representatives. This program of limited subsurface excavation was developed in consultation with SHPO and EIS cooperating agencies, including the federally recognized Santa Ynez Band of Chumash Indians, as well as non-federally recognized tribes. Additionally, the NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will include procedures for the development of a monitoring plan and an inadvertent discovery plan that spells out steps to follow if cleanup activities inadvertently encounter archaeological resources, human remains, or burial-related artifacts.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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Pedestrian surveys are of limited utility and never alone are sufficient when there are known areas of habitation or ceremony. We are informed that DOE has recently completed a Phase I Pedestrian Survey of the site. While such Phase I is an excellent first step, we request additional subsurface archaeological testing for all areas scheduled for any excavation.

If the project is in a region where there are many sites, there may be reason to suspect that buried sites may be present that went undetected during the survey. If the soils profile of the project location shows that heavy erosion has washed away soils then it may explain the absence of cultural resources. However, if the soils profile is depositional then there may be a need to conduct additional subsurface testing, particularly in areas where ground disturbance is planned. In archaeological terminology, this is referred to as "Extended Phase I" testing because it is an intermediate step between Phase 1 (survey), and Phase 2 (controlled excavation to assess the significance of a site). Extended Phase I testing often done by excavating a small pit with a shovel and screening the excavated soil through steel mesh ("shovel test pit" or "STP"). If it is considered to be necessary that a large amount of soil should be examined at deeper levels, then backhoes are sometimes used and informal sampling procedures are often employed while screening the backdirt.

Sometimes the lead agency will argue that archaeological survey is not warranted for a particular project or there may be factors that justify additional investigation even though a Phase I study has been completed with negative results. Following is a list of environmental and cultural factors that should be considered when assessing the overall cultural sensitivity of the SSFL. (Please note that this list is not exhaustive and each factor must be weighted both individually and collectively on a case-by-case basis.)

- a. Areas with high viewshed or visibility such as or ridgelines, peaks, ledges, outcrops, benches, or prominent hills; and
- b. Areas with a relatively high density of sites in the vicinity; and
- c. Areas where past ethnographic studies have revealed associated placenames. Keep in mind that placenames do not always refer to places where evidence of past cultural activity exists; and
- d. Areas near known sites. Mapped boundaries of sites most frequently reflect only cultural residue that was visible on the surface when the site was recorded and do not necessarily reflect the actual extent of the site. In addition, loci such as cemeteries or other areas may be adjacent to or nearby but separate from the main habitation; and
- e. Areas near known rock art sites or rocky outcroppings of the type where rock shelters and art have traditionally been located; and
- f. Areas in or near known gathering areas; and
- g. Though all sites are potentially worthy of protection, named, ethnohistorically documented village sites are of the highest priority and therefore warrant the greatest amount of protection

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**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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possible.

(11) Exhaustion of Non-Excavation Methods of remediation.

To the extent feasible, DOE should exhaust all non-excavation methods of remediation before performing any excavation that could potentially impact cultural and historic sites.

(12) Soil Prior disturbance is NOT Dispositive:

The mantra that cultural sites have been disturbed and therefore automatically are not significant is oftentimes incorrect:

- a. Disturbed sites still may contain valuable information. The newer approach is to treat disturbed sites as having the potential to provide information even if they have been disturbed;
- b. Disturbed sites still have spiritual significance;
- c. Disturbance may only be on the surface, while much excavation may continue to depths of up to 20 feet.

(13) Need to Analyze Cumulative Impacts to Cultural Resources:

The EIS must account for other remediation projects in other areas of SSFL:

- a. Need to add NASA cultural sites;
- b. Need to add Boeing cultural sites;
- c. Other areas within SSFL.

(14) NEW MITIGATION: Cultural Interpretive Center:

- a. Can use existing building;
- b. Preferably near saved historic structure and/or test stand;
- c. Preferably away from CA-VEN-1072;
- d. Need to reserve operation and maintenance funds.

(15) NEW MITIGATION: Native American monitoring during any ground disturbing activities.

(16) Need to protect CA-VEN-1072 from trespassers and vandals.

(17) Deferral of Mitigation until Record of Decision (ROD):

- a. It is problematic to defer any mitigation until ROD as it prevents meaningful comment;
- b. Commenter reserves the right to ask for recirculation of the DEIS and EIS for any such deferred mitigation.

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17-14 To the extent possible and in accordance with the Native Americans artifact exemption in the 2010 AOC and the NHPA Section 106 Programmatic Agreement being developed by DOE with consulting parties, DOE prefers to avoid soil removal where cultural resources are known and present.

17-15 DOE is aware that disturbance does not necessarily mean that a cultural resource is no longer significant in terms of the information it provides or its spiritual significance. For example, DOE conducted extended Phase I testing on a site that was disturbed by looters in the past. This site, VEN-1775, was first recorded in 2001 (W&S Consultants 2001), when the investigators concluded that 75 percent or more of the site had been removed, seriously compromising the site's integrity. However, following DOE's extended Phase I testing, researchers determined that this site retained enough integrity to be considered eligible for listing on the NRHP.

17-16 Chapter 5, Section 5.5.11, of this Final EIS analyzes cumulative impacts to cultural resources, as required by NEPA. As discussed in Sections 5.5.11.1, 5.5.11.2, and 5.5.11.3, impacts to archaeological, architectural, and traditional cultural resources in NASA and Boeing areas of SSFL are considered to contribute to the cumulative effects of DOE's cleanup activities. The effects of actions outside of SSFL are also considered in the analysis.

17-17 DOE appreciates your interest in future land uses at SSFL and points out that this Final EIS addresses only those areas of the site for which DOE has cleanup responsibilities, Area IV and the NBZ. DOE will continue to work with the Native Americans and the land owner, Boeing, to address potential impacts to cultural resources potentially affected by DOE cleanup of Area IV and the NBZ. Area IV and the NBZ are remote from the test stands and CA-VEN-1072. DOE does not believe any of its buildings in Area IV would be appropriate for a cultural interpretive center as suggested and cannot determine or commit to future land uses because it is not within DOE's authority to do so (as Boeing, not DOE, is the landowner).

17-18 In accordance with the Section 106 Programmatic Agreement currently under development, DOE will prepare a monitoring plan before ground-disturbing activities begin, and DOE will consult with the California SHPO, the Santa Ynez Band of Chumash Indians, and other tribes to determine where and when Native American monitoring is appropriate for building removal, groundwater cleanup, and soil cleanup.

17-19 CA VEN-1072 is located in Area II of SSFL, which is controlled by Boeing and NASA. It is not under DOE's purview, nor would it be affected by DOE's actions and, therefore, it is not evaluated in this Final EIS. Access to Area IV and the NBZ is controlled by Boeing.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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(18) Need NEPA Mitigation Plan

<http://www.whitehouse.gov/sites/default/files/microsites/ceq/20100218-nepa-mitigation-monitoring-draft-guidance.pdf>

February 18, 2010

**MEMORANDUM FOR HEADS OF FEDERAL DEPARTMENTS AND AGENCIES
FROM: NANCY H. SUTLEY, Chair, Council on Environmental Quality
SUBJECT: DRAFT GUIDANCE FOR NEPA MITIGATION AND MONITORING**

I. INTRODUCTION

To provide for the performance of mitigation, agencies should create internal processes to ensure that mitigation actions adopted in any NEPA process are documented and that monitoring and appropriate implementation plans are created to ensure that mitigation is carried out. See *Aligning NEPA Processes with Environmental Management Systems* (CEQ 2007) at 4 (discussing the use of environmental management systems to track implementation and monitoring of mitigation).

http://ceq.hss.doe.gov/nepa/nepapubs/Aligning_NEPA_Processes_with_Environmental_Management_Systems_2007.pdf (<http://www.slideshare.net/whitehouse/aligning-nepa-processes>).

Agency NEPA implementing procedures should require clearly documenting the commitment to mitigate the measures necessary in the environmental documents prepared during the NEPA process (40 C.F.R. § 1508.10) and in the decision documents such as the Record of Decision. When an agency identifies mitigation in an EIS and commits to implement that mitigation to achieve an environmentally preferable outcome, or commits in an EA to mitigation to support a FONSI and proceeds without preparing an EIS, then the agency should ensure that the mitigation is adopted and implemented.

Methods to ensure implementation should include, as appropriate to the agency's underlying authority for decision-making, appropriate conditions in financial agreements, grants, permits or other approvals, and conditioning funding on implementing the mitigation. To inform performance expectations, mitigation goals should be stated clearly. These should be carefully specified in terms of measurable performance standards to the greatest extent possible. The agency should also identify the duration of the agency action and the mitigation measures in its decision document to ensure that the terms of the mitigation and how it will be implemented are clear.

If funding for implementation of mitigation is not available at the time the decision on the proposed action and mitigation measures is made, then the impact of a lack of funding and resultant environmental effects if the mitigation is not implemented warrant disclosure in the EA or EIS. In cases where, after analyzing the proposed actions with or without the mitigation, the agency determines that mitigation is necessary to support the FONSI or committed to in the ROD, and the necessary funding is not available, the agency may still be able to move forward

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As discussed in Chapter 6 of the Final EIS, DOE will prepare a mitigation action plan for those mitigation commitments made in its Record of Decision (ROD) for the proposed remediation activities at SSFL Area IV and the NBZ. The plan would identify specific mitigation measures associated with alternatives selected in the ROD, and would describe plans for implementing the mitigation measures, monitoring their implementation and effectiveness, and reporting the results of mitigation efforts to DOE management and applicable Federal, State, local, and tribal entities and the public.

**Commenter No. 17 (cont'd): Rudy Ortega, Tribal President,
Fernandeño Tataviam Band of Mission Indians**

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with the proposed action once the funding does become available. The agencies should ensure that the expertise and professional judgment applied in determining the appropriate mitigation measure is reflected in the administrative record, and when and how those measures will be implemented are analyzed in the EA or EIS.

Under NEPA, a federal agency has a continuing duty to gather and evaluate new information relevant to the environmental impact of its actions. See 42 U.S.C. § 4332(2)(A). For agency decisions based on an EIS, the regulations require that, “a monitoring and enforcement program shall be adopted...where applicable for mitigation.” 40 C.F.R. §1505.2(c). In addition, the regulations state that agencies may “provide for monitoring to assure that their decisions are carried out and should do so in important cases.” 40 C.F.R. §1505.3. Monitoring plans and programs should be described or incorporated by reference in the agency decision documents.

(19) Incorporation by reference of Memo dated March 12, 2014, “Santa Susana Cleanup,” discussing NEPA alternatives analysis for selection of cleanup standards for the Santa Susana Field Laboratory Site.

Sincerely,



Rudy Ortega
Tribal President

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The subject memo and its accompanying email were considered in the development of the EIS. Chapter 2, Section 2.1, of this Final EIS identifies the reference as Santa Ynez Band of Chumash Indians 2014, noting that the Santa Ynez Band of Chumash Indians, a cooperating agency on this EIS, expressed their expectation that DOE would include “a robust analysis of alternatives.”

Commenter No. 18: M. Waite

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY

PUBLIC HEARING COMMENT FORM

PLEASE PRINT LEGIBLY

Location: Simi Valley Date: 2/18/17

DOE is breaking its word. Not one of its actions comply with AOC

All violate the AOC's would leave hazardous contamination behind.

DOE must uphold the AOC

As quoted "It is the right thing to do"

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Name: M. Waite

Organization:
[Redacted]

- Yes, include my name and address on the mailing list so I can receive information on the EIS.
- No, do not include my name and address on the mailing list.
- If you provide your name, it will appear along with your comment in the Final EIS unless you request otherwise. If you do not want your name included with your comment in the Final EIS, please check here.

Please turn in this form at the meeting or mail by March 14, 2017, to:
Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS,
U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063
Or submit comments via our website: www.SSFLAreaIV/EIS.com

18-1

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Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Following the soil removal actions, all action alternatives evaluated in this EIS would leave soil with contaminant levels protective of human health and the environment based on a future open space land use.

Commenter No. 19: John C. Detwiler


DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY

PUBLIC HEARING COMMENT FORM

PLEASE PRINT LEGIBLY

Location: Simi Valley Date: 2/18/17
DOE proposes 3 alternatives that would leave 245, 875 or even 970 of the contamination behind. All of these alternatives violate the AOC cleanup agreement that DOE signed in 2010.

**** CONTINUE ON BACK FOR MORE SPACE ****

Name: John C. Detwiler
Organization: 

- Yes, include my name and address on the mailing list so I can receive information on the EIS.
- No, do not include my name and address on the mailing list.
- If you provide your name, it will appear along with your comment in the Final EIS unless you request otherwise. If you do not want your name included with your comment in the Final EIS, please check here.

Please turn in this form at the meeting or mail by March 14, 2017, to:
Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS,
U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063
Or submit comments via our website: www.SSFLAreaIV/EIS.com

19-1

19-1 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Use of soil cleanup risk-based criteria is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Following the soil removal actions, all action alternatives evaluated in this EIS would leave soil with contaminant levels protective of human health and the environment based on a future open space land use.

Section 3 - Public Comments and DOE Responses

Commenter No. 20: Avalanto

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY

PUBLIC HEARING COMMENT FORM

PLEASE PRINT LEGIBLY

Location: Simi Valley Date: 2/18/17

All of DOE's proposed actions will result in dangerous radonucleides & toxic chemicals remaining on site

**** CONTINUE ON BACK FOR MORE SPACE ****

Name: Avalanto

Organization:



- Yes, include my name and address on the mailing list so I can receive information on the EIS.
- No, do not include my name and address on the mailing list.
- If you provide your name, it will appear along with your comment in the Final EIS unless you request otherwise. If you do not want your name included with your comment in the Final EIS, please check here.

Please turn in this form at the meeting or mail by March 14, 2017, to:
Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS,
U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063
Or submit comments via our website: www.SSFLAreaIV/EIS.com

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The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of risk-based criteria to determine soil cleanup is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Following the soil removal actions, all action alternatives evaluated in this Final EIS would leave soil with contaminant levels protective of human health and the environment based on a future open space land use.

Commenter No. 21: Anonymous

Basic points:

- The Dept. of Energy created serious environmental danger at SSFL - the meltdowns, accidents, spills and releases of dangerous nuclear and chemical contamination - it should clean up all of its mess.
- DOE did the right thing in 2010 when it signed a legally binding agreement, the AOC, to clean up ALL of the contamination.
- DOE is now breaking its word. **NOT ONE of DOE's proposed 4 actions complies with the AOC - all violate the AOC and all would leave hazardous contamination behind.**
- DOE's EIS repeatedly refers to its preference for "natural attenuation" which means doing nothing and letting it deteriorate over time, which they say is 70 years - that's 70 more years of migration into nearby communities. That's outrageous.
- **DOE says the weaker alternatives would be protective of public health but that is false. They have manipulated EPA risk-based standards to be quite literally thousands of times higher than EPA would allow.**
- DOE should not be looking at risk-based cleanups because they signed the AOC. In addition to risking public health, refusing to follow the AOCs means they've wasted \$41.5 million dollars spent on the radiological survey.
- **DOE must uphold the AOC. It's EIS should be focused on how to clean up to background, not whether to.**
- DOE has refused to look at routes that would avoid neighborhoods, there is a route to a nearby rail station that would avoid homes. This appears to be an effort to whip up opposition to the cleanup.
- DOE doesn't have the authority to decide how much gets cleaned up - the state DTSC has that authority per the AOCs.
- **DOE must uphold the AOC.**

BACKGROUND INFORMATION AND KEY POINTS ABOUT DOE's DEIS FOR SSFL

In 2010 the community celebrated a tremendous victory when both NASA and the Department of Energy (DOE) signed an Administrative Order on Consent (AOC) with the state's toxic regulatory agency, the Department of Toxic Substance Control (DTSC), that requires NASA and DOE to clean up their portions of SSFL to background levels of contamination. Unfortunately, the DOE's recently released Draft Environmental Impact Statement (DEIS), which is over 2 years overdue, proposes to break the legally binding commitments of the AOC and walk away from cleaning up large amounts of radioactive and toxic chemical contamination.

Key problems with DOE's EIS include:

- DOE proposes three alternatives that would leave 34%, 86% or even 94% of the contamination not cleaned up. All of the alternatives violate the AOC cleanup agreement that DOE signed in 2010.
- DOE's first proposed option claims to use the AOC's lookup tables, but proposes exempting nearly half a million cubic yards of soil it admits is contaminated from cleanup and to leave it in place instead - despite a requirement in the cleanup agreement that no "leave in place" alternatives be considered. DOE justifies the exemption on its hope that the contamination might lessen on its own 70 years from now and on potential exemptions that in fact violate the AOC's very limited exemptions.
- DOE claims that the second option involves cleanup to suburban residential standards, but it has manipulated that standard to be 100 - 1,000 times more lax than the true EPA suburban residential standard. DOE should not have included risk-based estimates, because the AOC

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21-1 As indicated in Chapter 1 of this Final EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater, and intends to complete remediation of SSFL Area IV and the NBZ in compliance with applicable requirements (including regulations, orders, and agreements) for cleanup of radioactive and hazardous substances. Chapter 1, Section 1.3, contains a history of the SSFL site that summarizes DOE's past activities in Area IV, including previous cleanup efforts. Additional information can be obtained from the DOE Energy Technology Engineering Center website (see <http://www.etc.energy.gov/>). This EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS will inform Federal decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

21-2 As the commenter notes, in 2010, DOE signed the AOC. As described in Chapter 2, Section 2.3.3, of this EIS, there are issues with implementing the technical elements of the AOC. These issues, the adverse effects of a massive excavation of Area IV, stakeholder input, and DOE's responsibility under NEPA regulations to "identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects" resulted in DOE identifying and evaluating additional alternatives that met its purpose and need (Please see Chapter 1, Section 1.1.) Each of the three soil remediation action alternatives analyzed in this EIS would leave SSFL Area IV and the NBZ safe for their designated future use as open space and is consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research.

Contrary to the commenter's assertion that pursuing risk-based alternatives would be a waste of the funds spent on radiological characterization, that activity provided valuable

Commenter No. 21 (cont'd): Anonymous

agreement is to clean up to background. Yet even without the AOC requirement for cleanup to background, longstanding EPA guidance says that DOE should rely on local zoning for setting the cleanup standard, which at SSFL is agricultural which would be sufficiently protective. DOE ignores that requirement. If suburban residential is to be used, as they claim they are, it needs to be the true standard, not one hundreds of times weaker.

- DOE's third option—to clean up to a standard of 25 millirem per year, the equivalent of a medically unnecessary chest X-ray every month of your life—also violates the 1995 DOE-EPA Joint Policy that all DOE sites must be cleaned up consistent with EPA Superfund guidance, which has declared 25 millirem to be non-protective. The option also involves averaging contaminated areas with cleaner ones, rather than cleaning up anything over the cleanup level, which is also barred by EPA guidance.
- DOE claims that a protective cleanup poses undue harm to the environment and that the contamination poses little risk. However, the contamination poses a very significant risk to public health in all DOE's options, risks that far outweigh environmental concerns which can be mitigated. Also, most of the cleanup is occurring in areas that are already disturbed by DOE activities. DOE was not concerned about the environment when it was polluting the land so badly, nor about trucks when they were driving up to SSFL every day bringing hazardous loads of spent commercial nuclear fuel from around the country.
- DOE's draft EIS fails to acknowledge that the AOC is a legally binding agreement, which DOE cannot choose to ignore unilaterally. DOE as the polluter doesn't have the authority to decide how much of the mess that it made is going to get cleaned up. The decision rests with DTSC for the chemicals under the Resource Conservation and Recovery Act, even if there were no AOC, and for the radioactivity under the AOC, which gave the authority to DTSC.
- The DOE states numerous times in the DEIS their desire to defer to "natural attenuation" (leaving much of the contamination in place to supposedly deteriorate over time) which they say would take at least 70 years. This is concerning, because it would mean that contamination would have remained on site for more than a century from the time it was created, constantly leaking offsite. Leaving the site contaminated for most of the rest of the century also raises serious questions about future use, given talk of converting the remediated site into a park, which thus couldn't happen with the left-in-place pollution.
- DOE failed to consider routes for the transportation of contaminated soil that avoid neighborhoods. DOE failed to consider, for example, alternative truck routes as well as the railroad station less than a quarter mile north of the site that is able to ship out contaminated soil. The station is accessible by routes that do not pass by any residences. Instead it only considered trucking the waste to a railroad line 60 miles away.
- All of DOE's proposed actions will result in dangerous radionuclides and toxic chemicals remaining on the site where they can continue to migrate and impact nearby communities. Future site visitors could also be impacted by contamination left in place that should be remediated before any public access occurs.

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information regarding the locations of radiological constituents in Area IV and the NBZ. As shown in Chapter 2, Figure 2-1, the locations with radiological constituents exceeding the provisional radiological look-up table (LUT) values are well delineated. The radiological characterization, along with chemical characterization of Area IV and the NBZ provide the data used by DOE in developing the three soil remediation action alternatives, all of which are protective of human health and the environment.

DOE disagrees that none of the alternatives evaluated in this EIS complies with the 2010 AOC. This EIS evaluates a soil remediation alternative (the Cleanup to AOC LUT Values Alternative) that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. This topic, including the application of exemptions and onsite treatment, are addressed in Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD. Please also see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD. With regard to chemical and radioactive constituents that would be left on site, the percentage values presented by the commenter are based solely on soil volume. As discussed in Section 2.2 of this CRD, each of the action alternatives evaluated for soil remediation would remove soil with chemical and radioactive constituents that pose a risk to human health or the environment.

21-3 The Draft EIS does not state a preference for any alternative or component of any alternative. The Final EIS states that monitored natural attenuation is being considered for "low concentrations" of total petroleum hydrocarbons (TPH) chemicals only. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans.) See Section 2.3.2 of this Final EIS for additional information. Following the soil removal actions, all action alternatives evaluated in this EIS would leave soil with contaminant levels protective of human health and the environment based on a future open space land use.

21-4 Please see Section 2.1, "Preferences for Cleanup," of this CRD for a response to comments about alternative preference. Also please see Section 2.7, "Offsite Impacts," of this CRD for a response to concerns about offsite impacts.

The EPA dose calculator default residential exposure pathways include a garden pathway which assumes 25 percent of the fruits and vegetables consumed by the resident are raised in a home garden. The EPA dose calculator results in the same risk slope factors as were used in the Draft EIS when the garden pathway is not included.

Commenter No. 21 (cont'd): Anonymous

The RBSLs used in the Draft EIS are comparable to soil cleanup standards applied by DTSC throughout California. Just because a soil value is above background, does not mean that the chemical is toxic at that concentration. Therefore the order-of-magnitude comparison is also moot.

A garden pathway was not used in the RBSLs for the Draft EIS, as residential development with garden is not a future land use for the SSFL property. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLs that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative. For both alternatives, the Final EIS retains the scenario evaluated in the Draft EIS, that is, a suburban residential scenario without a garden pathway for an Onsite Suburban Resident. This scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space. However, the garden pathway is included in the evaluation of an Offsite Suburban Resident. A second scenario was added for the Final EIS for the Conservation of Natural Resources Alternative and considers a scenario based on a future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., evaluates a recreational user as the onsite receptor).

When a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989) does allow averaging and prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and only suggests the use of a maximum value as a screening tool. It is important to note that under any of the soil remediation alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment, would be removed. Soils that would be left on site would have lower concentrations of chemical and/or radioactive constituents. Each of the soil remediation action alternatives analyzed in this EIS would leave SSFL Area IV and the NBZ safe for their designated future land.

Commenter No. 21 (cont'd): Anonymous

The 1995 DOE-EPA Joint Policy creates a framework for the conduct of decommissioning of DOE facilities and provides guidance to EPA Regions and DOE Operations Offices on the use of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund) response authority to decommission such facilities. However, it only ensures compliance with CERCLA requirements for remedy selection at National Priorities List (NPL) facilities. While SSFL is not on the NPL, this EIS does include an alternative/scenario consistent with the approach and process used by EPA in CERCLA cleanups.

DOE chose to identify the 25 millirem per year in its risk-based alternative for cleanup in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

- 21-5 Due to safety concerns, DOE would not be allowed to use passenger stations as a location to transfer soil to train freight cars. In addition, there is no route off of SSFL to a railroad facility where soil transfers could occur that does not go through a residential area. Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

DOE's intent is not to generate opposition to the SSFL cleanup, but it is true that the more soil that is removed to clean up the site, the more transportation will be required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. Results of the analyses allow a comparison of potential impacts, in this case transportation impacts, and tradeoffs between the alternatives. In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides would result in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1, and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 21 (cont'd): Anonymous

21-6 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action.

DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC. Discussion of the 2010 AOC and the legal implications are discussed in Chapter 1, Sections 1.4, of this Final EIS. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for a discussion of this topic and DOE’s response.

21-7 EPA guidance for conducting a risk assessment and soil cleanup does not state that risk should be based solely on zoning rules. Zoning rules are always subject to change. EPA’s Risk Assessment Guidance for Superfund, Part A (EPA 1989) states that in identifying future land use one should “determine possible alternate future land uses based on available information and professional judgment.” The decision-makers should “evaluate pertinent information sources (master plans, Bureau of Census projections, established land use trends in the general area and the area immediately surrounding the site).” More recently, OSWER Directive 9355.7-19 (EPA 2010b) stated that “Regions should use information related to reasonably anticipated future land use to formulate realistic assumptions regarding future land use and clarify how these assumptions fit in and influence the baseline risk assessment, the development of alternatives, and the CERCLA remedy selection process”. The “reasonably anticipated” future use for SSFL property will be that of open space. Therefore DOE is justified in evaluating future use based on that scenario.

Commenter No. 22: Lynn E. McKie

2/25/17

RE: SSFL Remediation Project
TO: STEPHIE JENNINGS, Document Manager

Dear Ms Jennings,
I am writing for my husband, Lynn E. McKie, who worked on "the Hill" for 47 years, and of course myself and daughter who have lived at the base of the Hill in the Sini Valley Knolls area for 41 years. We did not attend this round of public meetings, as we have tried three times before, but because my husband is very deaf, hearing and understanding was (in possible hearing aids amplify all sound). We have both read at least part of the remediation Draft EIS, tho found it difficult to understand. Perhaps we are both just not too bright, but found ourselves bego that the premise was so flawed, indeed not at all to the point of fact.

So, ...FACT we understand that all parties involved in decision making want to only address AREA 4, as the DOE does not want to be responsible for the reality that not only is the whole of SSFL contaminated, but unfortunately, everyone or everything downstream. This would be the San Fernando Valley and Sini Valley. There were leach lines in AREA 4 that did what they were supposed to do, distribute contaminants, waste water and radioactive materials and all manner of toxic stuff to be absorbed down into the water table all over the hill and downstream. There are at least nine test

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Thank you for your feedback. In preparing this Final EIS, DOE revised passages that were identified as confusing or that readers misunderstood in an effort to make it easier to understand.

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DOE notes your concern that the entire SSFL site should be addressed with respect to remediating contamination from past operations. As discussed in Chapter 1, Section 1.3, of this EIS, there are multiple parties with responsibilities at SSFL. This EIS is evaluating the potential environmental impacts associated with remediating that portion of SSFL for which DOE has cleanup responsibility, that is, Area IV, the location of DOE's Energy Technology Engineering Center, and the NBZ. No rocket engine testing occurred in Area IV and the NBZ. In addition to DOE, NASA, and Boeing are responsible for remediating portions of SSFL. NASA is responsible for cleanup of Area II, a portion of Area I, and portions of the NBZ impacted by its operations. Boeing is responsible for cleanup of Areas I and III and for demolition of 4 buildings in Area IV that it owns. Chapter 1, Section 1.9.2, of this EIS explains

Commenter No. 22 (cont'd): Lynn E. McKie

P.S. I am partially blind, I am not thinking anymore by city planning, I am not monitoring the location cleanup contract. I want approval with a response.

stands on the hill that used well water in flame defectors every time a rocket engine was tested which used hundreds of gallons of water for hundreds of such tests. Contaminated well water from the site. So... lots of ways for contamination to be spread. Ergo... THE WHOLE PREMISE OF ONLY AREA 4 CLEANUP IS FALSE.

We urge the powers that be who make the decisions to do nothing because it is already 40 to 60 years too late. Just wait the 100 or so years more. Lets let nature get on with it and not waste money, time, water to make so half-assed effort that will only in our estimation, raise more dust, push more contaminants into the water table and cause more harm.

Please, consider this proposal instead... Plant Trees and put up a stout fence. Let the animals and plants have it back. If the DOE is serious about making energy, let them use the property for solar collectors and wind generators. Lots of room. Don't worry, the few workers needed will not hesitate to go up there, just as my husband did not hesitate to go there every day for 47 years. No fear.

Feel free to use us as poster people for do nothing, local residents and former workers,
Sincerely, B. McKie For Lynn E. McKie

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that the DTSC is preparing a draft program environmental impact report (the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California*), in accordance with the CEQA, to evaluate the potential impacts of the combined remedial actions of DOE, NASA, and Boeing at SSFL (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Regarding the distribution of contaminants from past site operations, Chapter 1, Section 1.4 describes the extensive sampling that has been performed to identify the concentration and extent of chemical and radioactive constituents in soil in Area IV and the NBZ. Maps provided in Chapter 2, Sections 2.3.2, 2.4.1, and 2.4.2 show the extent of constituents in soil based on the different cleanup levels evaluated in this EIS. Groundwater has also been extensively characterized, with the extent of groundwater plumes that pose a potential risk shown in Chapter 2, Figure 2-11. As shown in that figure, the characterization data do not indicate that groundwater with concentrations above the Safe Drinking Water Act maximum contaminant levels has left the site from Area IV and the NBZ. Please refer to Section 2.7, "Offsite Impacts," of this CRD for discussion of this topic and DOE's response.

DOE acknowledges your concern about the environmental harm that could result from an extensive remediation effort at SSFL. It is not DOE's intent to conduct activities that would be harmful to the environment. Any soil remediation conducted by DOE would be performed in a manner that would minimize dust production and prevent migration of contaminants to groundwater. Remediation would also be performed in a manner that would protect existing biological resources by only removing contaminants that pose a risk, thereby minimizing damage. The intent of the remediation is to enhance the environment and thus would be a beneficial use of some resources. Because Boeing, and not DOE, is the land owner, it is not considering use of the land for energy generation. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

**Commenter No. 23: Andre van der Valk, President,
Chatsworth Neighborhood Council**



CHATSWORTH NEIGHBORHOOD COUNCIL
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Rudy Schultz · Melvin Stewart · Linda van der Valk · Jim Van Gundy · Lucie Volotzky · Dean Wageman · Matt Weintraub

March 1, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: DOE/EIS-0402, Area IV and Northern Buffer Zone
Santa Susana Field Laboratory

Dear Ms. Jennings,

The Chatsworth Neighborhood Council has reviewed selected data from the DOE's very thorough DEIS, and thanks the DOE for its willingness to include a wide variety of alternatives in the DEIS.

All cleanup alternatives provide for cleanup of the site to either suburban residential standards or cleaner. All presented cleanup alternatives provide a reasonable level of cleanup, or even excessive cleanup, when long term use of the property as open space is the intended use.

Having initially determined the ending condition of the site under any cleanup approach that was presented is sufficiently clean; we then considered the impact to our community under the presented alternatives.

The major effect of the different cleanup alternatives is the amount of truck traffic and potential related effects on our community from pollutants, wear and tear on the roads, and traffic. We would like to minimize these effects, as well as the taxpayer costs of the cleanup.

Based on the foregoing, our preferred alternative is the "Conservation of Natural Resources Alternative". This provides the least number of truck trips, the least soil removal, the least number of trips to replace soil, and the least cost to the taxpayers for the cleanup.

Our second choice of an alternative is the "Cleanup to Revised LUT Values Alternative". We note projected cancer risks are fairly similar under this proposal (1 chance in 100,000 to 270,000) to the extremely lengthy and problematic "Cleanup to AOC LUT Values Alternative", that is 1 chance in 100,000 to 310,000. Cleanup to Revised LUT Values Alternative provides the second best opportunity to minimize cleanup impacts to our community.

We are opposed to the Cleanup to AOC LUT Values Alternative. The cleanup is excessive, with severe environmental effects to our community for many years as the trucks continue to move soil with contamination that is not significant. The site will be further impacted by the unresolved absence of "adequate" replacement soil.

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DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 23 (cont'd): Andre van der Valk, President,
Chatsworth Neighborhood Council

We encourage that DOE adopt the "Conservation of Natural Resources Alternative" to clean up significant contamination, with the most minimal impacts to the site and surrounding community that is protective of human health and practical for the scope of cleanup.

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Sincerely,



Andre van der Valk
President

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Commenter No. 24: Eleanor & George Rembaum

Ms Stephe Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Dept of Energy
4100 Guardian St. Suite 160
Simi Valley CA. 93063

.What are the list of contaminates on site in soil and ground water & surface water? Will all these contaminates be cleaned up?

Are all these contaminates listed in the (LUT list?

How come radioactive contaminates are not listed in the IUT table. Will they be cleaned up & to what level ?

Why was only one sample taken at a local quarry- is one sample really representative?

How come samples were not taken at other quarrrys?

Why was money wasted taking samples of packaged soil which would never be use?

I hope you will consider these questions.

Eleanor & George Rembaum



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24-1 The chemicals of concern in soil are identified in the *Area IV Chemical Data Summary Report* (CDM Smith 2017) and the radionuclides of concern in soil are identified in the EPA report *Final Radiological Characterization of Soils, Area IV and the Northern Buffer Zone, Area IV Radiological Study* (HGL 2012b). The chemical and radiological constituents of concern in groundwater are presented in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.2.5 summarizes the chemicals and radionuclide constituents in soil and Chapter 3, Section 3.4.3 identifies the chemical and radioactive constituents in the groundwater below Area IV. Surface waters in Area IV are principally the result of precipitation and are therefore intermittent. They have the potential to contain the constituents in the Area IV soil. Chapter 3, Section 3.3.1 of this Final EIS identifies constituents that exceeded discharge limits in surface water releases following the 2005 Topanga wildfire. All of the soil removal action alternatives in this Final EIS address removal of chemical and radiological contamination in soil; the criteria for removal of this contamination depends on the action alternative being evaluated as discussed in Chapter 2 of this Final EIS. Please refer to Chapter 2, Sections 2.3 and 2.4 for description of the alternatives and cleanup levels. All of the soil removal action alternatives are protective of public health and safety and the environment.

24-2 DOE initiated the search for locating backfill soil meeting the AOC requirements by sampling at three sites (two commercial sites and a source of dredged lake sediment), evaluating existing data from a third potential site, and sampling of soil products that could serve as soil amendments. All samples did not meet the AOC requirements. In accordance with the AOC, DOE in December of 2016 notified DTSC of these initial findings. As of release of this Final EIS, DOE is awaiting a response from the DTSC.

24-3 In order to encourage new vegetation growth in disturbed soils, including backfill soils, nutrients and soil amendments are required. DOE sampled soil amendment products to see if they could be used. Based on the sampling of soil products that could serve as soil amendments, soil products used in backyard gardens would not meet the requirements of the 2010 AOC, illustrating the difficulty in re-establishing vegetation at SSFL. Section 2.3, "Suitable Backfill Soil," of this CRD provides additional information regarding backfill, including findings of backfill soil analyses conducted by NASA.

Commenter No. 25: Jean Graham

Dear Ms. Jennings,
I favor a risk-based clean-up of the Boeing site (Rocketdyne) in Siskiyou Valley. The site is home to many animal & plant species that could not well withstand the more extreme clean up. Plus, removal & replacement of so much soil could not be safe for the surrounding community.
Thank you, Jean Graham

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DOE acknowledges your support for a risk-based cleanup effort at SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please note that DOE is only responsible for cleanup of Area IV and the NBZ at SSFL; cleanup of other areas of SSFL is the responsibility of NASA and Boeing.

Commenter No. 26: Mikala Partington

March 1, 2017

Dear Ms. Jennings,

RE: EIS for Area IV of the SSFL

I am writing because I have many concerns regarding the proposed EIS (Environmental Impact Statement). In 2010 the Department of Energy and DTSC agreed to a cleanup plan and per that AOC agreement plan it was agreed upon to cleanup to background levels. In the new EIS it states that it will at best be cleaned up to "suburban residential levels". This deviates from the agreed upon action, and is unacceptable! I am worried about this because it will leave behind a lot of contamination. This new action not only will not be followed by the EPA's suburban residential standards, but it usually means that in the near future people can now live there! I don't want anyone to live there! As you are aware, there is large amounts of toxic contamination from decades long of testing, multiple accidents and dumping! In one of your proposed options the "leave in place" option- it is proposed that your agency does not know if it will clean up the groundwater because the contaminants will go away by itself, also known as "natural attenuation". Which is patently a provable false statement on your behalf. The three options that are now being presented will leave behind between 39% and 99% of the contamination behind! This is completely unacceptable! It's time for the DOE to fulfill its cleanup obligations to help ensure that current and future generations are not at risk from SSFL contamination.

Very Respectfully,



Mikala Partington

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26-1 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2 the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

26-2 It is true that the Draft EIS evaluated alternatives based on a suburban resident, without garden, exposure scenario; however, it also evaluated an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities. (Please refer to Section 2.2, "Compliance with the Administrative Order on Consent," of this CRD.) In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

26-3 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Therefore, SSFL Area IV and the NBZ do not contain "large amounts of toxic contamination."

DOE does not consider Monitored Natural Attenuation a 'leave in place' treatment methodology. As described in Chapter 2, Section 2.6.3 of this Final EIS, monitored natural attenuation as used in this EIS when considered as the only groundwater treatment method applies to locations with low concentrations of contaminants that are not amenable to treatment (the Metals Clarifier and RMHF [Radioactive Materials

Commenter No. 26 (cont'd): Mikala Partington

Handling Facility] TCE plumes) and where the natural decay of tritium would result in meeting the maximum contaminant level (MCL) by 2025. The reason that DOE would continue to monitor the location of impacted groundwater is to ensure that conditions do not change. Should the groundwater concentrations increase or monitoring indicates that contaminants are moving off site, DOE would take actions to control the contaminated groundwater.

Commenter No. 27: Alec Uzemeck

Alec Uzemeck

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U.S. Department of Energy
4100 Guardian St.
Simi Valley, CA 93063

Comments: Draft SSFL DOE EIS Area IV

Thank you for the opportunity to comment on the Draft EIS. I am the co-chair of the SSFL Community Advisory Group and a member of the West Hills Neighborhood Council, however I am submitting my own comments for your consideration.

The EIS is a well-written document with cleanup analysis, alternates and consequences, and it allows the public to evaluate a technical and complicated subject.

The No Action alternate is not acceptable since it does not clean up the site which is owned by Boeing and is inconsistent with Boeing's intent to have their entire property used for open space. The end use of the property for open space is an important consideration for the public.

The AOC describes a flawed cleanup method that has a list of chemicals and radioactive nuclides to be removed to background or detect using point-to-point sampling without any consideration of toxicity or threats to human health. This method guarantees the removal of an extraordinary amount of soil and the cleanup values are to be used for the selection of backfill soil and are so exacting that no acceptable backfill has been found. The AOC cleanup method should not be considered.

The next alternate proposes revising the AOC to allow the use of risk-based levels for cleanup, and of the 132 chemicals listed only 32 are potential threat to human health, and the amount of soil to be removed is greatly reduced, but the point-to-point sampling is retained. Unnecessary excavation will be included and this method is not recommended for consideration.

I support the last alternate, Conservation of Natural Resources, which revises the AOC, and uses risk based screening levels and area averaging for the clean up of chemicals and nuclides. This alternate would use U.S. EPA guidelines, and would minimize excavation, air pollution and truck traffic. In situ remediation could be used and backfill soil would be available under the safe and realistic cleanup values.

The reduction of the excavation is important for the conservation of the environment, culture and wildlife habitat at the SSFL this further supports the selection of this alternate.

I recommend that the air monitoring be expanded for residents' safety and testing be done for diesel fume particles, Valley Fever and other health threats such that excavation and transport could be curtailed while mitigation takes place.

Alec Uzemeck 3/5/17
Alec Uzemeck

27-1

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27-1 Thank you for your comment. It has been included in the Administrative Record for this Final EIS.

27-2 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

27-3 Regarding the commenter's request that the air monitoring be expended for residents nearby, due to the low air pollutant impacts on nearby residents that would occur from the proposed cleanup activities, DOE's visual monitoring and perimeter air monitoring stations are adequate to identify the need for any corrective actions to mitigate unacceptable air emissions.

This Final EIS demonstrates (Chapter 4, Section 4.6) that by complying with applicable Ventura County Air Pollution Control District (VCAPCD) Rules, combustible and fugitive dust emissions generated from cleanup activities proposed by DOE would produce less than significant air quality impacts on locations outside of the SSFL boundary. (One indication of the significance of air quality impacts is that air emissions would be well below any level of health concern to sensitive members of the population.) Direct transport of these emissions to a distance of nearly one mile to the nearest residence or farther would further dilute these pollutant concentrations to well below any level of health concern.

The proposed cleanup activities would adhere to a fugitive dust control plan that identifies a variety of measures to minimize emissions and therefore to comply with VCAPCD Rule 55 – Fugitive Dust. Personnel would visually monitor the proposed cleanup activities on a real time basis and if there were any noticeable increase in emissions, such as fugitive dust, they would quickly implement measures to mitigate their intensities, thereby avoiding any substantial air pollutant exposure to the public. Minimization measures are identified in Chapter 6, Table 6-1 (Subsection: Air Quality and Greenhouse Gases). Monitoring of cleanup activities is identified in Minimization Measure 6-1.

DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE, the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is currently operating the system to establish a pre-remediation baseline. The system will continue to operate

Commenter No. 27 (cont'd): Alec Uzemeck

during remediation activities to monitor any potential air pollutant releases of concern. If the air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

Air quality impacts from proposed offsite haul truck transport would be minimal due to the relatively low emission rates of these vehicles (See Chapter 4, Section 4.6 and Chapter 6, Table 6-1, items 6-2 and 6-4.) As discussed in Chapter 4, Section 4.6.4.2 of this Final EIS, the air quality analysis estimates that unmitigated diesel particulate matter (DPM) emissions generated by a 2023 average California truck fleet within the entire South Coast Air Basin analysis domain under the nearby disposal site scenario would amount to less than 500 pounds per year, or about 5 pounds during a peak day (based on 250 days per year) (Leidos 2018b; Tables 1.B-15 and 1.B-17). These emissions would occur over about 160 miles of roadway that span a large portion of the SCAB. As a result, populations adjacent to roadways proposed for the transport of materials from the SSFL would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions.

Regarding the request to test for the presence of Valley Fever, this Final EIS, Section 4.9.2.6, states that there are no commercially available tests to reliably test the soil for *Coccidioides* spores before working in a particular location (CDC 2014; HESIS 2013). Soil testing is currently only done for scientific research, and the available methods to detect *Coccidioides* in the soil do not always detect the spores, even when they are present (CDC 2014). Because the spores may be present in the soil, reasonable precautions would be taken to reduce potential for exposure. For example, the fugitive dust control plan mentioned above will include measures to reduce the risk of spreading Valley Fever that focus on fugitive dust controls recommended by the VCAPCD to minimize fungal spore entrainment, as well as minimizing worker exposure (VCAPCD 2003).

Commenter No. 28: Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
08EVEN006-2017-CPA-0050

March 14, 2017

Stephanie Jennings, NEPA Document Manager
U.S. Department of Energy
4100 Guardian Street
Suite 160
Simi Valley, California 93063

Subject: Comments on the Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory in Ventura County, California (DOE/EIS-0402).

Dear Ms. Jennings:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory. The Santa Susana Field Laboratory is the site of former nuclear energy testing, rocket engine testing, and other industrial research that caused soil and water contamination. The Department of Energy (DOE) is proposing to conduct cleanup activities to remove this soil and water contamination from Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory site located in Ventura County, California.

The mission of the U.S. Fish and Wildlife Service (Service) is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. To assist in meeting this mandate, the Service provides comments on public notices issued for projects that may have an effect on those resources, especially federally-listed plants and wildlife. The Service's responsibilities also include administering the Endangered Species Act of 1973, as amended (Act). Section 9 of the Act prohibits the taking of any federally listed endangered or threatened wildlife species. "Take" is defined at Section 3(19) of the Act to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The Act provides for civil and criminal penalties for the unlawful taking of listed wildlife species. Such taking may be authorized by the Service in two ways: through interagency consultation for projects with Federal involvement pursuant to section 7, or through the issuance of an incidental take permit under section 10(a)(1)(B) of the Act.

In 2010, DOE signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substances Control (DTSC) related to the cleanup of contaminated soils within Area IV. The AOC requires excavation and/or treatment of soil containing any chemical that exceeds a Look-Up Table value set by DTSC. The Look-Up Table values are set at either background or analytical method limits, and do not consider risk of the chemical to human health or the environment. This method is intended to remediate the site to conditions which occurred prior to the industrial research activities at the site, or "cleanup to background." The AOC allows for an exemption to the mandate

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service

Stephanie Jennings

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to cleanup to background, for the protection of sensitive biological resources such as listed species and their designated critical habitat, contingent on the opinion of the Service demonstrating that such an exemption is warranted. In a letter dated February 2, 2017, (08EVEN00-2016-TA-0583) the Service provided technical assistance to DOE regarding the status of Braunton's milk-vetch within Area IV as well as general information about the potential effects of the cleanup on Braunton's milk-vetch and its critical habitat. The letter is attached for your reference.

Our review of the proposed project alternatives indicates that the area that would be affected supports the endangered Braunton's milk-vetch (*Astragalus brauntonii*) and its designated critical habitat. The DOE has previously provided us with data indicating that both Braunton's milk-vetch and its designated critical habitat are present in the proposed cleanup area and would likely be impacted by cleanup activities within Area IV (DOE 2016). The extent of this impact would vary according to the alternative chosen by DOE for cleanup activities.

The proposed biological and cultural exemption area shown in Figure S-5 of the DEIS includes the most important habitat areas for Braunton's milk-vetch, including its designated critical habitat. We support DOE's proposal to evaluate the need for cleanup actions within this exemption area using risk-based screening levels. We understand the intent of the cleanup to background as remediating the site to conditions which existed prior to the industrial testing activities; however, there is the possibility that chemicals may exist in the soil at concentrations that are above background but pose no appreciable risk to humans or the environment. In these instances, soil excavation would pose a far greater environmental risk than allowing low levels of soil contamination to persist. The proposed use of risk-based screening levels within the biological exemption area would achieve the objective of removing harmful contamination while minimizing impacts to Braunton's milk-vetch and its critical habitat.

In December 2016, the Service published an Endangered Species Act Compensatory Mitigation Policy (81 FR 95316). Under this policy any unavoidable impact to listed species or their habitats would require compensatory mitigation to ensure a "net gain" or, at a minimum, "no net loss" in the conservation status of affected resources. Accordingly, if DOE chooses to implement an alternative for this project that would impact the Braunton's milk-vetch or its designated critical habitat, the Service would expect DOE to incorporate suitable compensatory mitigation in the project description.

If you have any questions, please contact Dou-Shuan Yang or Jenny Marek of my staff at [REDACTED]

Sincerely,



Stephen P. Henry
Field Supervisor

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28-1

Thank you for your comment. It has been included in the Administrative Record for this Final EIS.

28-2

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Consistent with the Biological Assessment prepared by DOE and the Biological Opinion issued by the U.S. Fish and Wildlife Service (see Appendix J), DOE would incorporate suitable compensatory mitigation measures to protect the Braunton's milk-vetch and its designated critical habitat, as appropriate, into the detailed plans for remediation of Area IV and the NBZ.

**Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service**

LITERATURE CITED

[DOE] Department of Energy. 2016. Effects of soil remediation on Braunton's milk-vetch (*Astragalus brauntonii*) and its critical habitat in Santa Susana Field Lab Area IV. Letter addressed to U.S. Fish and Wildlife Service, Ventura, California, dated July 26, 2016.

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
08EVEN00-2016-TA-0583

February 2, 2017

John Jones, Federal Project Director
Department of Energy, Energy Technology Engineering Center
4100 Guardian Street, Suite 160
Simi Valley, California 93063

Subject: Technical Assistance Related to Proposed Cleanup Actions Affecting Braunton's
Milk-vetch and its Critical Habitat at the Santa Susana Field Lab, Ventura
County, California

Dear Mr. Jones:

We are responding to your letter received via electronic mail on July 26, 2016, requesting technical assistance from the U.S. Fish and Wildlife Service (Service) on potential effects to the federally endangered Braunton's milk-vetch (*Astragalus brauntonii*) and its critical habitat during cleanup activities within Area IV of the Santa Susana Field Laboratory. The Santa Susana Field Laboratory is the site of former nuclear energy testing, rocket engine testing, and other industrial research that caused soil and water contamination that is the subject of current cleanup efforts. The U.S. Department of Energy (DOE) is responsible for cleanup actions within Area IV.

In 2010, DOE signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substances Control (DTSC) related to the cleanup of contaminated soils within Area IV. The AOC requires excavation and/or treatment of soil containing any chemical that exceeds a Look-Up Table value set by DTSC. The Look-Up Table values are set at either background or analytical method limits, and do not consider risk of the chemical to human health or the environment. This method is intended to remediate the site to conditions which occurred prior to the industrial research activities at the site, or "cleanup to background." Your letter included a map showing Braunton's milk-vetch habitat within Area IV that would be affected by a cleanup to background (Figure 1). The AOC allows for an exemption to the mandate to cleanup to background, for the protection of sensitive biological resources, contingent on the opinion of the Service demonstrating that such an exemption is warranted.

This letter is intended to provide DOE with information about the methodology that the Service uses to evaluate the effects of projects on listed species and critical habitat, important characteristics of Braunton's milk-vetch and its critical habitat, the general types of effects we anticipate if a cleanup to background is conducted, and our recommendations for minimizing the impact of the cleanup on Braunton's milk-vetch.

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**Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service**

John Jones

2

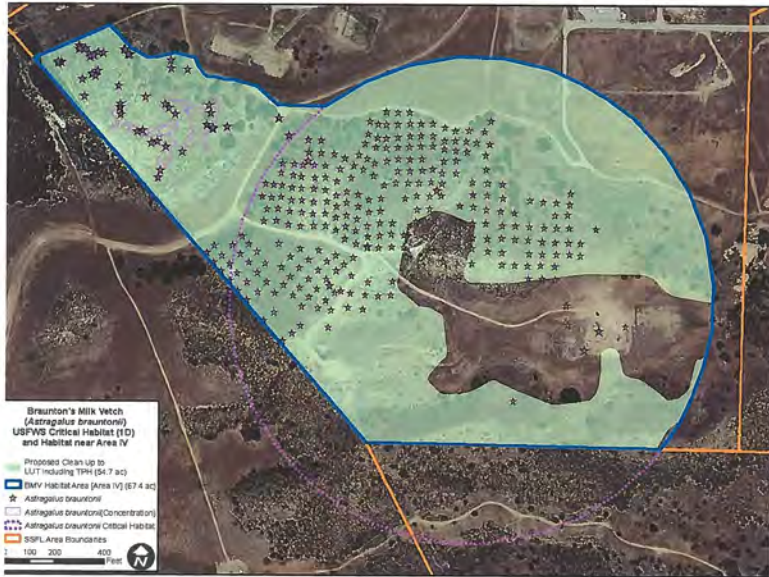


Figure 1. Braunton's milk-vetch habitat and designated critical habitat, within Area IV of the Santa Susana Field Lab that would be subject to cleanup to background shown in green (DOE 2016).

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service

John Jones

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Jeopardy Determination Methodology

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. "Jeopardize the continued existence of" means "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 Code of Federal Regulations (CFR) 402.02).

The jeopardy analysis relies on four components: (1) the Status of the species, which describes the range-wide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the species; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities, that are reasonably certain to occur in the action area, on the species.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the species, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the species in the wild by reducing the reproduction, numbers, and distribution of that subspecies.

Adverse Modification Methodology

Section 7(a)(2) of the Endangered Species Act requires that Federal agencies ensure that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of designated critical habitat. A final rule revising the definition of "destruction or adverse modification of critical habitat" was published on February 11, 2016 (81 Federal Register (FR) 7214). The revised definition states: "Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the conservation of a species or that preclude or significantly delay development of such features."

The revised "destruction or adverse modification" definition necessitates that we focus our analyses on how Federal actions affect the quantity and quality of the physical or biological features of the designated critical habitat for a listed species and, especially in the case of unoccupied habitat, on any impacts to the critical habitat itself. Specifically, the Service will generally conclude that a Federal action is likely to "destroy or adversely modify" designated critical habitat if the action results in an alteration of the quantity or quality of the essential physical or biological features of designated critical habitat, or that precludes or significantly delays the capacity of that habitat to develop those features over time, and if the resulting effect of the alteration is to appreciably diminish the value of critical habitat for the conservation of the species.

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**Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service**

John Jones

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The Service may also consider other kinds of impacts to designated critical habitat. For example, some areas that are currently in a degraded condition may have been designated as critical habitat for their potential to develop or improve and eventually provide the needed ecological functions to support species' recovery. Under these circumstances, the Service generally may conclude that an action is likely to "destroy or adversely modify" the designated critical habitat if the action alters it to prevent it from improving over time relative to its pre-action condition. The "destruction or adverse modification" definition applies to all physical or biological features; as described in the proposed revision to the current definition of "physical or biological features" (50 CFR 424.12), "[f]eatures may include habitat characteristics that support ephemeral or dynamic habitat conditions" (79 FR 27066).

The adverse modification analysis relies on four components: (1) the Status of Critical Habitat, which describes the range-wide condition of designated critical habitat for the species in terms of the essential physical or biological features, the factors responsible for that condition, and the intended recovery function of the critical habitat overall; (2) the Environmental Baseline, which analyzes the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated and interdependent activities on the essential physical and biological features and how that will influence the recovery role of the affected critical habitat units; and (4) Cumulative Effects, which evaluates the effects of future non-Federal activities, that are reasonably certain to occur in the action area, on the essential physical and biological features and how that will influence the recovery role of affected critical habitat units.

Braunton's Milk-vetch and its Critical Habitat

Braunton's milk-vetch was listed as Endangered on January 29, 1997 (62 FR 4172). Extensive information on the life-history and status of Braunton's milk-vetch is available in a variety of reference materials, including several documents that have been prepared specifically for Area IV of the Santa Susana Field Lab (Fotheringham and Keeley 1998, Service 1997, Service 2006, Service 2009, DOE 2016). The aspects of Braunton's milk-vetch biology that are particularly relevant to understanding the effects of the cleanup are listed below.

- Braunton's milk-vetch is restricted to carbonate limestone substrates that occur as rare outcroppings in disjunct parts of the Los Angeles basin (Fotheringham and Keeley 1998).
- Braunton's milk-vetch is a short-lived perennial that germinates in response to disturbances such as wildfires and other surface alterations.
- Braunton's milk-vetch has a life-history strategy that involves long periods of time where the species is present in the environment in the form of seeds, with few or no vegetative (i.e., above-ground) plants present at an occupied site. These seeds survive within the soil and sprout in response to an event that triggers germination.

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service

John Jones

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- Neither the fruits nor the seeds have specialized adaptations to facilitate seed dispersal by wind, therefore it is likely that most seeds fall within a short distance of the parent plant, with a fraction being transported further by water or animals (Fotheringham and Keeley 1998).
- The number of Braunton's milk-vetch plants at the Santa Susana Field Lab is greater than any other known population, with over 30,000 individuals documented on site in 2009 (DOE 2016).
- Since the time of listing in 1997, two occurrences on local agency lands have been extirpated by development activities. Additionally, half of the currently known occurrences, 10 out of 20, are on private or local agency lands and are potentially threatened by indirect or direct effects from existing or future urban development, recreational activities, and/or other land management activities (Service 2009).

Critical habitat for Braunton's milk-vetch was designated at the site on November 14, 2006 (71 FR 66374). The Northern Simi Hills Unit 1D (Unit 1D) occurs largely within the Santa Susana Field Lab, within Area IV (Figure 1). The South Simi Hills Unit 2F, has a small overlap with the Santa Susana Field Lab, in a portion of the site that is not subject to cleanup by DOE and will not be discussed further in this letter. The Northern Simi Hills Unit 1D was listed because it is occupied by the species and because multiple populations within an entire range increase a species' chance of persistence. As described above, the Service evaluates effects to critical habitat by analyzing how the physical and biological features of the critical habitat may be affected by the project. The physical and biological features of Braunton's milk-vetch critical habitat are:

- Calcium carbonate soils derived from marine sediment;
- A low proportion (less than 10 percent) of shrub cover directly around the plant; and
- Chaparral and coastal sage scrub communities characterized by periodic disturbances that stimulate seed germination (e.g., fire, flooding, erosion) and reduce vegetative cover.

Effects of the Cleanup on Braunton's Milk-vetch and its Critical Habitat

The Service is not aware of any soil treatment technologies that may be considered for application in the areas shown in Figure 1. Excavation of soil that exceeds Look-Up Table values is the only viable cleanup option being considered that would meet the cleanup to background standard outlined in the AOC. The effects to Braunton's milk-vetch and its critical habitat from this cleanup strategy include the following:

- 81 percent (54.7 acres) of Braunton's milk-vetch habitat within Area IV would be subject to excavation under a cleanup to background;

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service

John Jones

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- 63 percent (44.3 acres) of Braunton's milk-vetch critical habitat Unit 1D would be subject to excavation under a cleanup to background;
- Removal of the soil would also remove the seed bank that is essential to support the Braunton's milk-vetch population at the site;
- Removal of the soil would also remove the chaparral and coastal sage scrub community that Braunton's milk-vetch relies on;
- Braunton's milk-vetch requires calcium carbonate soils derived from marine sediments; back-fill that may be brought in following the removal of native soils may not be suitable to support the species and would not have any seedbank and soil microorganisms native to the site;
- The remaining Braunton's milk-vetch habitat within Area IV that would not be affected by the cleanup to background (11.8 acres) was previously used as a borrow area and has already been subject to the removal of calcium carbonate soils, loss of a majority of its seedbank, and destruction of the chaparral and coastal sage scrub community; and
- The highest quality habitat for Braunton's milk-vetch remaining at this occurrence is within the area that would be subject to soil removal. Habitat areas adjacent to Area IV, outside of the Santa Susana Field Laboratory boundary, are not known to support a substantial number Braunton's milk-vetch and are not expected to serve as a source population to reestablish the occurrence following the cleanup.

In summary, the cleanup to background approach would substantially affect the Braunton's milk-vetch occurrence at Area IV, which represents the largest number of individuals of any known occurrence throughout the species' range. The nature and extent of effects to Braunton's milk-vetch from a cleanup to background could potentially cause the extirpation of the species from this occurrence due to loss of seedbank, loss of suitable soils, and loss of appropriate co-occurring vegetation community. The cleanup to background would also destroy 63 percent of the physical and biological features of Braunton's milk-vetch designated critical habitat Unit 1D. An additional 17 percent of that same critical habitat unit is already degraded by previous actions, creating a combined total of 80 percent of the critical habitat unit with physical or biological features that are either completely removed/destroyed or degraded to a potentially irreversible extent.

Through a formal consultation, we would analyze whether the effects to Braunton's milk-vetch and its critical habitat at Area IV would jeopardize the continued existence of Braunton's milk-vetch range-wide and/or destroy or adversely modify critical habitat for Braunton's milk-vetch to a level that appreciably diminishes the value of critical habitat for the conservation of the species. Prior to completing that analysis we cannot definitively state the effects of a cleanup to background on the fate of the species; however, the anticipated effects within Area IV are direct and are substantial. The cleanup to background would potentially extirpate Braunton's milk-

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service

John Jones

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vetch from the largest of 20 remaining occurrences, in a landscape where 10 of those occurrences are threatened by potential future development and land management activities. The cleanup to background would also likely destroy or substantially degrade the physical and biological features in a majority of critical habitat unit 1D, which was designated because it is occupied by the species and because having multiple occurrences of the species throughout its range increases the chance that the species will survive into the future.

We recommend that DOE and DTSC consider exercising an exemption to the AOC within Braunton's milk-vetch habitat, such that cleanup actions are only conducted in areas where contamination poses a risk to human health or the environment. We understand the intent of the cleanup to background as remediating the site to conditions which existed prior to the industrial testing activities; however, there is the possibility that chemicals may exist in the soil at concentrations that are above background but pose no appreciable risk to humans or the environment. In these instances, soil excavation would pose a far greater environmental risk than allowing low levels of soil contamination to persist. We recommend that DOE conduct human health and ecological risk assessments to identify areas where soil contamination exceed risk thresholds, and target soil excavation in those areas only. We can re-evaluate the effects to Braunton's milk-vetch from this revised cleanup scenario upon request, and can recommend strategies to implement the cleanup while minimizing effects to Braunton's milk-vetch.

If you have any questions regarding this letter, please contact Jenny Marek of my staff at [REDACTED]

Sincerely,


Stephen P. Henry
Field Supervisor

cc:

Mary Meyer, California Department of Fish and Wildlife.

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Commenter No. 28 (cont'd): Stephen P. Henry, Field Supervisor,
U.S. Fish & Wildlife Service

REFERENCES

[DOE] Department of Energy. 2016. Effects of soil remediation on Braunton's milk-vetch (*Astragalus brauntonii*) and its critical habitat in Santa Susana Field Lab Area IV. Letter addressed to U.S. Fish and Wildlife Service, Ventura, California, dated July 26, 2016.

Fotheringham and Keeley. 1998. Ecology and distribution of Braunton's milk-vetch (*Astragalus brauntonii*) and Lyon's pentachaeta (*Pentachaeta lyonii*). Prepared for Mary Meyer, California Department of Fish and Game, Long Beach, California.

[Service] U.S. Fish and Wildlife Service. 1997. Determination of endangered status for two plants and threatened status for four plants of southern California. Final rule. Federal Register Volume 62, Number 19: 4172 - 4183.

[Service] U.S. Fish and Wildlife Service. 2006. Designation of critical habitat for *Astragalus brauntonii* and *Pentachaeta lyonii*. Final rule. Federal Register Volume 71, Number 219: 66374-66423.

[Service] U.S. Fish and Wildlife Service. 2009. Braunton's milk-vetch (*Astragalus brauntonii*) 5-year review and evaluation. Ventura Fish and Wildlife Office, Ventura, California.

Response side of this page intentionally left blank.

Commenter No. 29: Martha Wait

RE: Comment on SSFL Draft Environmental Impact Statement

Clean up to AOC 2010 standards
That is the legally binding agreement,
Any alternative is unacceptable
and should not be allowed.
Health and safety are the
priority and must be protected.

3-8-17 Signed: Martha Wait

29-1

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DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

29-2

29-2

DOE agrees with placing a high priority on health and safety and remains committed to protecting the human health and safety of current and future users of the site and of the residents in the surrounding communities.

Commenter No. 30: Richard C. Parker

RE: Comment on SSFL Draft Environmental Impact Statement

Sirs:

On March 8, 2017 I attended a community meeting regarding the SSFL cleanup progress and process. I've lived in West Hills for 31 years and to my complete and utter disdain and amazement there has been little to no progress at the Santa Susana Field Laboratory nuclear melt down site. Now I'd come to my attention that the DOE is not willing to abide to their 2010 contractual agreement to clean up the site. John Jones the DOE Project Director for the SSFL stated in February 2014 that the DOE would completely clean up the site to the agreed upon background levels for both chemical and radiological constituents. This delay is both reprehensible and immoral. The DOE is now stalling and trying to manipulate the agreed upon settlement in order to pay little or no cleanup at all. This is unacceptable and will not be tolerated. Signed: *Richard C. Parker*

30-1

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There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). (Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Please see Section 2.1, "Preferences for Cleanup," of this CRD, which addresses steps that must be complete before cleanup can resume, and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 31: John Zaragoza, Chair,
Board of Supervisors County of Ventura



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March 7, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 91063

Dear Ms. Jennings:

Thank you for the opportunity to comment.

Unfortunately the EIS does not analyze cleaning the DOE site to the agreed upon stipulations in the 2010 Agreement On Consent. Instead, hundreds of thousands of cubic yards of soil, some with known significant chemical and radiological contamination that would be covered by the AOC, are exempted from remediation. The public's health must be your first priority. A clear analysis of a project that will remediate contamination as agreed upon in the AOC needs to be thoroughly evaluated in the EIS.

The DOE must not leave unknown quantities and concentrations of contamination on site, nor avoid due diligence in analyzing full remediation of known contaminants in excess of background levels. The EIS's exemption of hundreds of thousands of cubic yards of soil, on the basis that it may impact biological or cultural resources, is premature, lacks transparency, reneges on DOE's agreement from the 2010 AOC, and if implemented, would threaten the public's health.

The Ventura County Board of Supervisors strongly recommends that the EIS be consistent with remediation of DOE's SSFL site to the levels stipulated in the AOC.

Sincerely,

John Zaragoza
Chair, Board of Supervisors

cc: Matt Rodriguez, Secretary, Cal EPA
Barbara Lee, Director, DTSC

31-1 The Draft EIS and this Final EIS include an alternative that incorporates the technical elements of the 2010 AOC, the Cleanup to AOC LUT Values Alternative. The Cleanup to AOC LUT Values Alternative does not leave “hundreds of thousands of cubic yards of soil” with “significant chemical and radiological contamination” within Area IV. It removes all soil that could pose a risk to human health and the environment, as well as other soil that does not pose a threat, exceeding what would occur at EPA CERCLA sites and DTSC-regulated sites throughout California. There is no soil with “significant chemical and radiological contamination” being exempted from soil cleanup. As discussed in Chapter 2, Section 2.3.2, of this Final EIS, soils within areas in which the exemption process would be applied that have higher concentrations of chemicals or radionuclides, that is, those that pose a risk to human health or to plants and animals, would be removed. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD, for a discussion of soil remediation alternatives, including the alternative that incorporates the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. In none of the alternatives does DOE propose leaving soil with chemical and/or radiological contamination that would pose an unacceptable human health or ecological risk based on the future open space land use.

31-1

31-2 The exemption process described in the EIS is not premature nor does it lack transparency. The process for biological exemptions is based on several years of meetings with the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Wildlife (CDFW), and DTSC staff. DOE received letters from USFWS and CDFW accepting the exemption process. Appendix E of this EIS lists those meetings and the names and affiliations of the attendees. Application of exemptions would be based on the process described in this EIS and the USFWS Biological Opinion (see Appendix J of this EIS). Appendix E also list meetings and attendees that were held to address cultural resources. Exemptions for historic resources would be based on the process in an NHPA Section 106 Programmatic Agreement, which is being developed by DOE in consultation with the California Office of Historic Preservation, the federally recognized Santa Ynez Band of Chumash Indians, non-federally recognized tribes, and other consulting parties. Please refer to “Application of Exemptions under the 2010 Administrative Order on Consent” (Section 2.4 of this CRD) for a discussion of this topic and DOE’s response.” None of the action alternatives presented in this EIS would threaten the public’s health.

31-2

31-1
cont'd

Commenter No. 32: Daniel Brin
West Hills Neighborhood Council



West Hills
Neighborhood Council

"It's our neighborhood.
Let's build a community."

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March 2, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: DOE/EIS-0402, Area IV and Northern Buffer Zone
Santa Susana Field Laboratory

The West Hills Neighborhood Council has reviewed the DOE's Environment Impact Statement in which the DOE presents cleanup alternatives with explanations of each process and evaluations of the consequences for the environment, cultural resources, public health, and surrounding communities.

We believe that it is in the public interest to clean up the property to a level safe for humans and for use as open space; therefore we do not accept the "No Action" alternative.

The remaining three alternatives provide for cleanup of the site to suburban residential standards and, with the exception of the AOC, meet acceptable contamination levels per US EPA standards.

We are opposed to the "Cleanup to AOC LUT Values" alternative. This cleanup is destructive and uses chemical lists and extraordinary cleanup levels provided by unknown sources without consideration of whether they pose any threats to human health. We believe that it will be a large-scale excavation that will impact the environment and the surrounding communities. Although no replacement soil has been identified to date, after a suitable backfill is found this process will result in a tremendous increase in truck and related traffic on local streets and airborne contaminants in surrounding communities.

The selection between the remaining two alternatives is based on the consequences to the communities, which are driven by the size of the excavation, in situ treatment, and backfill and include the resulting air pollution and truck traffic. We prefer an alternative, which provides the least amount of truck traffic, soil removal, soil disturbance, soil replacement and airborne pollution. Additionally we want DOE to use on-site remediation to the maximum extent possible to further reduce air pollution and truck traffic.

West Hills will be the community most impacted by the site cleanup and a minimization of activity would generate minimal air pollution. It is important that the DOE monitor the dust and gases in the surrounding communities so that activities can cease and mitigation take place when airborne contaminant levels become unacceptable. We also recommend that local residents be monitored for any unusual illness trends that may be related to the site activity.

Respectfully,

President

P.O. Box 4670, West Hills, CA 91309-4670
mail@westhillsnc.org * www.westhillsnc.org



32-1 DOE acknowledges your support for an alternative that provides the least amount of truck traffic, soil removal, soil disturbance, soil replacement, and airborne pollution. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

As discussed in Chapter 2, Section 2.3.2, of this EIS, one potentially effective form of onsite remediation would be to use monitored natural attenuation for management of certain low-concentration, petroleum-contaminated (TPH) soil. DOE has estimated that this onsite treatment method would reduce the amount of soil to be considered for removal at Area IV and the NBZ by about (620,000 cubic yards, with corresponding reductions in truck traffic and emissions of air pollutants. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans.). This or any other onsite treatment method would have to be approved by DTSC.

32-2 This Final FEIS demonstrates (Chapter 4, Section 4.6) that by complying with applicable Ventura County Air Pollution Control District (VCAPCD) Rules, combustive and fugitive dust emissions generated from cleanup activities proposed by the DOE would produce less than significant air quality impacts on locations outside of the SSFL boundary. Direct transport of these emissions to a distance of nearly one mile to the nearest residence or farther, such as the West Hills community about 3 miles away, would further dilute these pollutant concentrations to well below any level of health concern.

The proposed cleanup activities would adhere to a fugitive dust control plan that identifies a variety of measures to minimize emissions and therefore to comply with VCAPCD Rule 55 – Fugitive Dust. Personnel would visually monitor the proposed cleanup activities on a real time basis and if there were any noticeable increase in emissions, such as fugitive dust, they would quickly implement measures to mitigate their intensities, thereby avoiding any substantial air pollutant exposure to the public.

DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is operating the system to establish a pre-remediation baseline. The system will continue to operate during remediation activities to monitor any potential air pollutant releases of concern. If the

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Commenter No. 32 (cont'd): Daniel Brin
West Hills Neighborhood Council

air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

Air quality impacts from proposed offsite haul truck transport would be minimal, due to the relatively low emission rates of these vehicles. As discussed in Final EIS Chapter 4, Section 4.6.4.2, the air quality analysis estimates that unmitigated diesel particulate matter (DPM) emissions generated by a 2021 average California truck fleet within the entire South Coast Air Basin analysis domain under the nearby disposal site scenario would amount to less than 31 pounds per year, or about 0.4 pounds during a peak day (based on 32 truck round trips per peak day) (Leidos 2018b; Tables 1.A-23 and 1.A-24; [DPM is about 20 percent of the PM10 values in these tables]). These emissions would occur over about 160 miles of roadway that span a large portion of the SCAB. As a result, populations adjacent to roadways proposed for the transport of materials from the SSFL would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions.

Due to the low air pollutant impacts on nearby residents that would occur from the proposed cleanup activities, DOE's visual monitoring and perimeter air monitoring stations are adequate to identify the need for any corrective actions to mitigate unacceptable air emissions.

- 32-3** Health studies for the area around SSFL have been conducted in the past. DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of data on offsite contamination, historical health monitoring, and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Based on available data and the analysis in this EIS, DOE does not believe health monitoring in the vicinity of the site is necessary, but notes that the State of California collects data on and maintains a registry of incidences of cancer.

**Commenter No. 33: Matthew Ottoson, President,
USGBC Central Coast Green Building Council**



February 20, 2017

To: **Ms. Stephanie Jennings**
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

We are the Central Coast Green Building Council, a local chapter of the U.S. Green Building Council representing the communities of Ventura, Santa Barbara, and San Luis Obispo Counties. We are concerned that the Department of Energy's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup will not remove the long term community and environmental hazards associated with the remaining pollution at the SSFL site. We acknowledge the great scientific work produced at the SSFL that enabled the U.S. to fly to the moon and we expect the DOE to clean up the site so that it can be celebrated by the community as a monument to American ingenuity.

A basic philosophy of the U.S. Green Building Council is to balance the health of the environment, the people and the economy in order for all three to thrive. The past activities at the SSFL resulted in pollution that has damaged the health of the environment and the adjacent community. The DOE can restore the balance by proceeding with a full cleanup of all toxic chemicals and radioactive materials at the site, so that the environment, community and economy in this area can continue to heal and thrive. We think that it would be appropriate to err on the side of caution, given the unfortunate exposure to carcinogens and known toxins to both the environment and the community in the past.

The DOE should respect the 2010 Administrative Order of Consent (AOC) agreement (as described in the DEIS Section 1-7) and provide no less than full site cleanup. Any "leave in place" cleanup methods, including natural attenuation and "no action" methods should not be considered. The AOC

Central Coast Green Building Council

P.O. Box 31017, San Luis Obispo, CA 93106

www.usgbc.org/centralcoast

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33-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD, for further discussion of this topic. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) Use of a risk-based criteria to determine soil cleanup is consistent with the approach used by DOE at other DOE sites, by DTSC at DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. (In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.) Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD, for

**Commenter No. 33 (cont'd): Matthew Ottoson, President,
USGBC Central Coast Green Building Council**



is a legally binding agreement with the California Department of Toxic Substance Control (DTSC), and the DTSC should continue to manage the extent of the cleanup. The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the California DTSC is the regulator who decides cleanup requirements for these toxic chemicals. We request adherence to the 2010 AOC Agreement in full, and maintain that the management of the cleanup remain with the California DTSC.

DOE's recently submitted DEIS and its proposed options for cleanup make it clear that DOE wants to abandon its 2010 commitment to clean up all of its contamination at SSFL (See DEIS Soil Remediation Alternative S.10.2). Instead, the DOE proposes leaving between 39% and 99% of the dangerous radionuclides and toxic chemicals on site, not cleaned up, where they will continue to migrate and put nearby communities at risk. The long term damage to the ecosystem, watershed and biological environment outweigh the short term impacts of full cleanup to the natural ecosystem and cultural artifacts on the site.

Although complete remediation of the toxic materials on the site is more expensive to the DOE, the alternative long term cost to the nearby communities will be even greater in terms of illness, ongoing pollution to the water table and ongoing medical care for the community. The pollution onsite has already migrated into the adjacent populated areas via rainwater runoff, prevailing westerly winds, and via natural fires as evidenced by increased local cancer rates among nearby residents as identified by the September 1997 Tricounty Regional Cancer Registry that shows increases in lung and bronchial cancers, the March 2007 University of Michigan identifying increases in thyroid cancer cases, and the 2012 California Breast Cancer Mapping project that identified a 10-20% increase in breast cancers for people living in the vicinity of SSFL. We have the opportunity to clean up the site once and for all and the time is now.

Large amounts of water will be used to control dust during the full removal of the hazardous soil, and if the DOE can use reclaimed water for that purpose, this will be more sustainable than using our valuable potable water resource for dust control.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will continue to experience increased risk of cancer and

Central Coast Green Building Council

P.O. Box 31017, San Luis Obispo, CA 93406

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a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE acknowledges your concern about cleanup of SSFL per the 2010 AOC and your concern about offsite migration of contaminants and health risk. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD, for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties. DOE acknowledges that there are chemical and radioactive constituents above background radiation levels in parts of that portion of SSFL for which it is responsible, Area IV and the NBZ. See Chapter 4, Section 4.9, of the EIS for information on chemical and radioactive constituents in Area IV and the NBZ. DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in a cleanup of Area IV and the NBZ that would be protective of the public health and safety and the environment.

33-3

DOE agrees that use of reclaimed water would be desirable for dust control. Chapter 6, Table 6-1 of this Final EIS identifies minimization measures that DOE proposes to use as part of the remediation action alternatives. Included in these minimization measures are 1) Use captured rainwater, uncontaminated wastewater, or treated water for building demolition and soil and groundwater remediation activities or site restoration activities when possible (e.g., for wash water, irrigation, dust control, constructed wetlands, or other uses), and 2) Water used in the remediation technologies will be treated and released to the surface under a National Pollutant Elimination Discharge System Permit, discarded offsite, or used for dust suppression.

Chapter 7, Table 7-1, of this Final EIS, summarizes the applicability of greener cleanup using best management practices (BMPs) in DOE's remediation activities. DOE would use the minimization measures in Table 6-1 for the action alternatives. The BMPs in Table 7-1 offer additional measures that DOE would evaluate and decide whether

**Commenter No. 33 (cont'd): Matthew Ottoson, President,
USGBC Central Coast Green Building Council**



illnesses related to exposure to SSFL contaminants. The DEIS Appendix G identified 28 found radionuclides, and 56 additional toxic chemicals including PCB's, PAH's, dioxins, petroleum chemicals, mercury and silver. The Agency for Toxic Substances and Disease Registry identifies many of these as chemicals known to cause various cancers, and are classified as Group 1 Carcinogens to humans by the International Agency for Research on Cancer. We request your faithful dedication in protecting the health of our communities and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up all SSFL contamination. We look forward to the day when the site has been cleaned up, and we can celebrate the achievements of the Southern California aerospace industry at this historical site. Thank you.

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Sincerely,



Matthew Ottoson
President | USGBC Central Coast Green Building Council



to implement during the cleanup process as opportunities arise. In this table, DOE addresses the potential for use of reclaimed water for such activities as dust control or wash water. Sources of water could include captured stormwater runoff or treated extracted groundwater. The use of captured stormwater runoff, however, would require coordination with the landowner (Boeing), and the use of treated extracted groundwater (a minor potential source of reclaimed water) would require approval by the State of California. There are no wastewater treatment facilities in the vicinity of SSFL capable of supplying reclaimed water and DOE is not considering construction of a parallel reclaimed water distribution system for site reclamation activities. Such a distribution system would need to pass through urbanized areas and then up the steep slope to SSFL, and it would potentially result in additional environmental impacts.

Commenter No. 34: Teena A. Takata, President,
Santa Susana Mountain Park Association



Santa Susana Mountain Park Association
Dedicated to the Preservation of the Simi Hills and Santa Susana Mountains

P.O. Box 4831
Chatsworth, CA 91313-4831
ssmpa.com mail@ssmpa.com

March 6, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: **DOE/EIS-0402, Area IV and Northern Buffer Zone of the Santa Susana Field Laboratory**

The Santa Susana Mountain Park Association ("SSMPA") has reviewed the DEIS for Area IV and parts of the Northern Buffer Zone (January 2017) and offers the following comments:

In formulating our comments, we note the property that is the subject of the EIS is owned by Boeing, who has publicly stated on multiple occasions that this property will be used as open space after the cleanup, with restrictions to ensure open space will be the permanent use of the site.⁷

The property is located in the Simi Hills on the west side of the San Fernando Valley. The DOE site, combined with the rest of the Boeing and NASA properties, encompasses approximately 2800 acres and serves as a key portion of a wildlife habitat and migration corridor in the western San Fernando Valley and the eastern Simi Valley. This corridor provides significant access points for animals, as well as plants, to move between the Santa Monica Mountains National Recreation Area and the Los Padres National Forest to the north. This site represents one of the largest parcels in the Rim of the Valley study area that is expected to become open space in the future. Long term use of the site will include hiking trails and public use as open space.

All cleanup alternatives ("No Action" Alternative aside) provide for cleaning up soil to suburban residential standards or cleaner.⁽⁵⁻¹²⁾ Suburban residential cleanup standards assume residential use by humans who live on the site for life. Therefore the risk statistics cited in the DEIS⁽⁵⁻³⁰⁾ are considerably higher than would be incurred in occasional recreational use, rather than constant presence on the land. We note cleanups traditionally use risk-based standards such as suburban residential, open space (a lesser level of cleanup), or agricultural (a higher level of cleanup since food is grown on the land), but soil cleanups to background LLIT values are extraordinarily uncommon.

The "Cleanup to AOC Look-Up Table Values Alternative" has been shown through the DOE EIS to place a heavy financial burden on taxpayers, and carries significant negative impacts to nearby residents due to haul truck traffic and related pollution impacts over many, many years.⁽⁵⁻²⁸⁾ We see no rationale for removing background-level chemicals that are not typically tested for, and are not generally viewed as dangerous to humans.

Concerns with the effects of this "Background" level cleanup also include the inability to replace removed soil due to no soil being available that has a composition clean enough to be approved as replacement soil.⁽⁵⁻²⁹⁾ Although this issue was identified in 2010, no solution has become evident and DTSC has suggested no practical alternative. The AOC requires replacement of the soil that is removed. The DOE DEIS has made it clear that even soil sold commercially for landscaping is not sufficiently clean.⁽⁵⁻²⁹⁾ We ask what benefit, if any, we all would gain under the "Background" level cleanup compared to a more traditional risk-based standard.

SSMPA Comments on DOE EIS v1_0

Page 1 of 3

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DOE acknowledges your opposition to the Cleanup to AOC LUT Values Alternative. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for further discussion of this topic.

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cont'd

Commenter No. 34 (cont'd): Teena A. Takata, President,
Santa Susana Mountain Park Association

We oppose the "Cleanup to AOC LUT Values Alternative." It is excessive, with severe negative environmental effects for many years as trucks continue to haul soil with inconsequential contamination through local communities to distant dump sites. As the SSFL shifts to its long term use as open space, it would continue to be impacted by the unresolved absence of "adequate" replacement soil. The removal of additional chemicals under the "AOC LUT Values Alternative," does not serve any useful purpose, and yet entails many years of traffic and related pollution effects.

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We feel that minimizing the proposed action to provide cleanup to suburban residential standards is effective and imposes much milder negative effects on surrounding communities. The long term use of the site as open space, combined with the presence of significant native cultural artifacts and native vegetation on the site, including several uncommon and rare native plants, guides us to a risk-based cleanup approach.

Based on the above discussion, our preferred alternative is the "Conservation of Natural Resources Alternative." This provides the fewest truck trips, the least soil removal, the fewest trips to replace soil, and the least cost to taxpayers.

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34-2

DOE acknowledges your support for the Conservation of Natural Resources Alternative for soil remediation and Groundwater Monitored Natural Attenuation Alternative for groundwater remediation. Please see Section 2.1, "Preferences for Cleanup," of this CRD for further discussion of this topic.

A valid similar alternative is the "Cleanup to Revised LUT Values Alternative." We note projected cancer risks are fairly similar under this proposal (1 chance in 100,000 to 270,000) to the extremely lengthy and problematic "Cleanup to AOC LUT Values Alternative," (1 chance in 100,000 to 310,000).⁽⁵⁻³⁶⁾ The "Cleanup to Revised LUT Values Alternative" provides the second best opportunity to minimize cleanup impacts to our communities.

We note that cancer risks cited in the DOE EIS ⁽⁵⁻³⁶⁾ are based on suburban residential standards, not on the lesser exposures that will be experienced by open space users of the site. Consequently the stated cancer risks in the DEIS are significantly above the actual risk anticipated for future users of the site. Cleanups that would be done under all of the presented alternatives are highly protective of human health for the less intense use of this site as open space.

We encourage the DOE to adopt the "Conservation of Natural Resources Alternative" to clean up significant contamination, with the most minimal impacts to the site and surrounding communities.

34-2
cont'd

We also urge the DOE to implement the "Groundwater Monitored Natural Attenuation Alternative" in conjunction with the "Conservation of Natural Resources Alternative" for soils, thereby adopting what the DOE EIS designates the "Low Impact Combination," the alternative combination with the smallest environmental consequences.⁽⁵⁻⁷⁰⁾

Sincerely,



Teena A. Takata
President, Santa Susana Mountain Park Association
P. O. Box 4831
Chatsworth, CA 91313-4831

**Commenter No. 34 (cont'd): Teena A. Takata, President,
Santa Susana Mountain Park Association**

1: http://www.boeing.com/resources/boeingdotcom/principles/environment/pdf/boeing_santa_susana_kuehl_englander_pay%20letter.pdf

(8-rtn) refers to page numbers in DOE/EIS-0402, Area IV and Northern Buffer Zone of the Santa Susana Field Laboratory.

About Santa Susana Mountain Park Association:

Santa Susana Mountain Park Association is a 45 year-old non-profit organization based in Chatsworth, Los Angeles, California.

We represent approximately 700 members and concerned citizens, and we partner with many organizations to promote ecological and recreational quality in Southern California.

SSMPA's mission is to preserve and protect the Simi Hills, Santa Susana Mountains, and regional open space.

SSMPA Board of Directors:
Teena Takata, John Luker, Vanessa Walters, Bob Dager, Darlene Brothers-Wagman,
Warren Stone, Donna Nachrab, Tom Nachrab, Wendi Gladstone, Sharon Shingai, Dean Wagertan

Response side of this page intentionally left blank.

Commenter No. 35: Julie Deignan

KARTCHNER CAVERNS SANTA BARBARA STATE PARK

Discovery Spines is an impressive natural phenomenon that slowly drips from the ceiling over a long period to form mineral precipitates collected on the cave floor leaving behind unique mineral columns.
Photographer - Steve Hestand



Dear Ms. Jennings,
Clean air, clean soil & clean water are essential to Americans living healthy, productive lives. The EPA & DOE are in place for us to oversee the cleanup & regulation of toxic waste & pollution. Please Commit to the full clean up of the Santa Susana Field Laboratory site, which could affect so many in Impact the Ventura + Simi Valley Communities.
Julie Deignan Ventura, CA

U.S. Dept. of Energy
Stephanie Jennings
Deputy Federal Project Director
4100 Guardian St.
Suite 160
Simi Valley, CA 93063

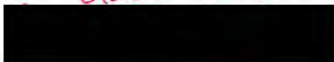
35-1

35-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 36: Lauri Moore

Ms Jennings,
It is imperative that
the cleanup for
the SSFL
occur. The
DOE needs to
withdraw the EIS.
Lauri Moore



Stephanie
Jennings
4100 Guardian St
Suite 100
Simi Valley, CA
93063

36-1

36-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

36-2

36-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Additionally, DOE is under court order from the U.S. District Court for the Northern District of California to prepare an EIS. DOE may not transfer possession or otherwise relinquish control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision.

Commenter No. 37: Andrea Horigan

Dear Stephanie Jennings,

I am writing to urge you to stick to your commitment as DOE to clean up the Santa Susana Field Laboratory Area IV.

You need to help protect our community and clean up all of the contamination at SSFL.

Sincerely Andrea Horigan

37-1

37-1

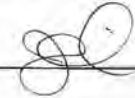
DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 38: Jenny Oliver

RE: Comment on SSFL Draft Environmental Impact Statement

Ms. Jennings,
There should be no alternative ~~to~~
except cleaning Santa Susana to
background. I am outraged that
this cleanup has not even started
when there is a legal document
stating the site would be clean
by 2017. CLEAN UP THE MESS!
How many more people have to die?

Signed: _____



38-1

38-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of the site, as well as necessary steps prior to continuing cleanup, and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

38-2

38-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 39: Jeri Oliver

RE: Comment on SSFL Draft Environmental Impact Statement

CLEAN UP SANTA SUSANA
NOW! SOONER RATHER THAN
LATER, PEOPLE ARE DYING!

Signed: Jeri Oliver

39-1

39-2

39-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with the CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC will also need to approve DOE's soil cleanup, groundwater cleanup, and facility closure plans before those activities can start. DOE will work closely with DTSC to ensure initiation of cleanup starts as early as possible.

39-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of data on offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 40: Gustavo Miramontes

RE: Comment on SSFL Draft Environmental Impact Statement

Uphold The AOC!
Clean SSFL to BACKGROUND.
Nothing ELSE IS ACCEPTABLE!
This should have already
been cleaned up!!

Signed: _____

40-1

40-1

DOE acknowledges your concern about upholding the 2010 AOC and cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

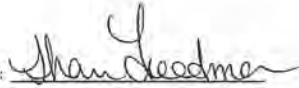
With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with the CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Cleanup will begin following completion of these regulatory actions. DTSC will also need to approve DOE's soil and groundwater cleanup plans before those activities can start. DOE will work closely with DTSC to ensure initiation of cleanup starts as early as possible.

Commenter No. 41: Shari Freedman

None of the proposed alternatives clean up SSFL to the standards that DOE committed to in the Agreement on Consent (AOC)

- DOE must not violate the agreement by looking at alternatives to following it (other than the baseline do-nothing alternative)
- The agreement is a debt that the United States owes to the people of California, and the United States cannot question its debts
- DOE should consider various alternatives for HOW to follow the AOC, including alternatives to using trucks, using alternate routes, and isolating the most contaminated soil to reduce the amount of soil that must be removed

Signed:



41-1

41-1

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of risk-based criteria to determine soil cleanup is consistent with the approach used for cleanup actions at other DOE sites, by DTSC at DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. A discussion of suggested transportation options and the DOE response to these suggestions are discussed in Section 2.9 "Options for Transportation of Waste from SSFL," of this CRD.

Commenter No. 42: Julie Korenstein

RE: Comment on SSFL Draft Environmental Impact Statement

We have lived under the cloud of TOXIC
Chemicals & Radiation in our backyards for too long
DOE has been responsible for decades of
contamination at the Santa Susana Field Lab
including a partial meltdown in the late 1950s.
Children are ill & are dying of cancer. Toxic water
is seeping into the groundwater & into Simi Valley
wells. We can no longer tolerate this contamination!
It has been over 50 years! Clean it up NOW!
CLEAN UP TO BACKGROUND!

Signed: Julie Korenstein

42-1

42-1

DOE acknowledges your concern regarding offsite contamination and health effects at SSFL. While there is groundwater contamination on site (see Chapter 3, Section 3.4 of this Final EIS), there is no evidence that contamination from Area IV is impacting offsite groundwater; please refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information on these subjects. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

42-2

42-2

DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in a cleanup of Area IV and the NBZ that is protective of public health and safety and the environment.

DOE acknowledges your concern about cleanup of SSFL to background radiation levels. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with the CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Cleanup will begin following completion of these regulatory actions.

Commenter No. 43: Mohammad Ali Esmaili


RE: Comment on SSFL Draft Environmental Impact Statement

Dear Ms. Jennings,

I am outraged by DOE's Draft Environmental Impact Statement for the Santa Susana Field Laboratory Area IV cleanup.

DOE must abide by 2010 AOC and respect all three of cleanup alternatives for soil remediation, all of which are prohibited under the AOC.

Signed:

 3-11-17

43-1

43-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 44: C. Lincoln

RE: Comment on SSFL Draft Environmental Impact Statement

I am very upset that the DOE is attempting to break its promise to clean up SSFL completely. The clean up was supposed to be completed by 2017 - instead the DOE is proposing to change or completely avoid clean up.

The draft EIS does not include a number of the better routes to access the site & remove the contamination. This should be done.

DOE must keep its promises made in the AOC in 2016. Protect our health & the health of future generations.

Signed: 

44-1

44-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of the site, as well as necessary steps prior to continuing cleanup, and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

44-2

44-2

Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

44-1
cont'd

44-3

44-3

DOE agrees with placing a high priority on health and safety and remains committed to protecting the human health and safety of current and future users of the site and of the residents in the surrounding communities.

Commenter No. 45: Alec Uzemeck
SSFL Community Advisory Group



SSFL COMMUNITY
ADVISORY GROUP

Citizens Working Together for the Responsible Cleanup of the Former
Santa Susana Field Laboratory
<http://ssflcag.net/> mail@ssflcag.net

March 15, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
US Department of Energy
4100 Guardian St Suite 160 Simi valley, CA 93063

Re DOE EIS Area IV and Northern Buffer Zone

Santa Susana Field Laboratory

Thank you for the opportunity for the CAG to comment on your SSFL Environment Impact Statement. The document is well researched, develops alternatives with their benefits and consequences, and allows for the future selection of a cleanup method.

The CAG supports the Conservation of Resources alternative, which satisfies the National Contingency Plan, The California Health Act, NEPA and the US EPA guidelines, and includes development of alternatives, the use of risk assessment and area averaging. The existing AOC agreement between DOE and DTSC does not satisfy any of these laws and regulations and needs to be rewritten. This alternate would accurately identify those areas for remediation that present threats to human health, and would result in less excavation, backfill, pollution and truck traffic. The amount of truck traffic and pollution are the selection criteria for an alternate since they are the primary concerns of the surrounding communities. Backfill would be readily available.

The No Action alternative should not be considered. This site is leased by DOE from Boeing, and if DOE does not clean up the site, that action would not support Boeing's commitment to clean their property to an US EPA standard of suburban residential for ultimate use as open space.

The existing AOC contains directions for a severely flawed process and should not be selected for implementation. This contractual agreement contains a list of chemicals that are to be removed from the DOE site that was compiled from unknown sources, and directs cleanup to background or detect. The document does not have any consideration of end use, human health, toxicity or health threats, and it does not comply with any of the federal and state laws and regulations governing such cleanups. Furthermore it requires point-by-point sampling for 132 substances with extraordinarily low test values that almost guarantee rejection and the requirement for removal of massive amounts of soil. The backfill must meet the same values as the cleanup, and to date no backfill soil has been found that meets those criteria.

The Revised LUT Values alternative accounts for toxicity, end use of the site and threats to human health. It reduces the number of substances that would trigger rejection of soil by approximately 80 percent, with corresponding reductions of excavation, backfill, trucks and pollution. However this

45-1

45-1

Thank you for your comment. It has been included in the Administrative Record for this Final EIS.

45-2

45-2


DOE acknowledges the SSFL Citizen Advisory Group's (CAG's) support for the Conservation of Natural Resources Alternative for soil remediation and Groundwater Monitored Natural Attenuation Alternative for groundwater remediation. Please see Section 2.1, "Preferences for Cleanup," of this CRD for further discussion of this topic. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 45 (cont'd): Alec Uzemeck
SSFL Community Advisory Group

alternate uses point-by-point sampling, and does not reduce the excavation as much as the Conservation of Natural Resources. This alternate is our second choice.

The choice for Groundwater Remediation should be Monitored Natural Attenuation. The bedrock is holding the contamination in place with the exception of several plumes that are being monitored, pumped and treated. The groundwater is not used for drinking water.

The EIS does include an air-sampling program that will monitor the site when work is under way, but for the community, the CAG recommends that the sampling include health risks such as Valley Fever and diesel fine particulates.


Alec Uzemeck, Co-chair
Dr. Ziman Co-chair
Santa Susana Field Lab
Community Advisory Group
14443 Shawnee St.
Moorpark, CA 93021

Page 2

45-2
cont'd

45-3

45-3

Due to the low air pollutant impacts on nearby residents that would occur from the proposed cleanup activities, DOE's visual monitoring and perimeter air monitoring stations are adequate to identify the need for any corrective actions to mitigate unacceptable air emissions.

This Final FEIS demonstrates (Chapter 4, Section 4.6) that by complying with applicable Ventura County Air Pollution Control District (VCAPCD) Rules, combustive and fugitive dust emissions generated from cleanup activities proposed by the DOE would produce less than significant air quality impacts on locations outside of the SSFL boundary. (One indication of the significance of air quality impacts is that air emissions would be well below any level of health concern to sensitive members of the population.) Direct transport of these emissions to a distance of nearly one mile to the nearest residence or farther would further dilute these pollutant concentrations to well below any level of health concern.

The proposed cleanup activities would adhere to a fugitive dust control plan that identifies a variety of measures to minimize emissions and therefore to comply with VCAPCD Rule 55 – Fugitive Dust. Personnel would visually monitor the proposed cleanup activities on a real time basis and if there were any noticeable increase in emissions, such as fugitive dust, they would quickly implement measures to mitigate their intensities, thereby avoiding any substantial air pollutant exposure to the public. Minimization measures are identified in Chapter 6, Table 6-1 (Subsection: Air Quality and Greenhouse Gases). Monitoring of cleanup activities is identified in Minimization Measure 6-1.

DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE, the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is currently operating the system to establish a pre-remediation baseline. The system will continue to operate

Commenter No. 45 (cont'd): Alec Uzemeck
SSFL Community Advisory Group

during remediation activities to monitor any potential air pollutant releases of concern. If the air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

Air quality impacts from proposed offsite haul truck transport would be minimal, due to the relatively low emission rates of these vehicles. (See Chapter 4, Section 4.6 and Chapter 6, Table 6-1, items 6-2 and 6-4.) As discussed in Final EIS Chapter 4, Section 4.6.4.2, the air quality analysis estimates that unmitigated diesel particulate matter (DPM) emissions generated by a 2023 average California truck fleet within the entire South Coast Air Basin analysis domain under the nearby disposal site scenario would amount to less than 500 per year or 5 pounds during a peak day (based on 250 days per year) (Leidos 2018b; Tables 1.B-15 and 1.B-17). These emissions would occur over about 160 miles of roadway that span a large portion of the SCAB. As a result, populations adjacent to roadways proposed for the transport of materials from the SSFL would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions.

Regarding testing for the presence of Valley Fever, Chapter 4, Section 4.9.2.6, of this Final EIS indicates that there are no commercially available tests to reliably test the soil for *Coccidioides* spores before working in a particular location (CDC 2014; HESIS 2013). Soil testing is currently only done for scientific research, and the available methods to detect *Coccidioides* in the soil do not always detect the spores, even when they are present (CDC 2014). Because the spores may be present in the soil, reasonable precautions would be taken to reduce potential for exposure. For example, the fugitive dust control plan mentioned above will include measures to reduce the risk of spreading Valley Fever that focus on fugitive dust controls recommended by the VCAPCD to minimize fungal spore entrainment, as well as minimizing worker exposure (VCAPCD 2003).

Commenter No. 46: Bruce Boyer

NEPA DOCUMENT MGR 3-20-2017

I am a resident of Cobble Lake. My daughter and mother are all residents (we own three homes there.) do not want the SSFL dug-up. The area should be preserved. We do not want our neighborhood ruined for science to appear the favorites. We are science based people. We do not support "green" (drum) we want science based actions, or non-actions. We are educated, not "internet-educated". We live near nuclear in Germany. My wife worked science and I was an NBC NBC in the US Army. I know a good deal about nuclear and chemical contamination.

Bruce Boyer
[Redacted]

46-1

46-1

DOE acknowledges your concern about preservation of SSFL and application of science-based actions or non-actions. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

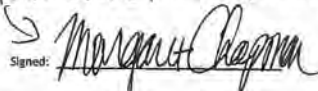
Commenter No. 47: Margaret Chapman

Stephanie

RE: Comment on SSFL Draft Environmental Impact Statement

DOE proposes four alternatives that would leave 39%, 91%, 99% or 100% of the contamination not cleaned up. All of the alternatives violate the cleanup agreement that DOE signed in 2010, which prohibits leaving contamination on site.

UPTOLD THE AOC and Start Charging fines!

Margaret Chapman
Signed: 

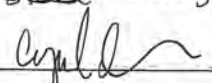
47-1

47-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 48: Crystal Cunningham

RE: Comment on SSFL Draft Environmental Impact Statement

UPHOLD THE AOC!
Clean up to background
Nothing else is acceptable!
Crystal Cunningham
Signed: 

48-1

48-1

DOE acknowledges your concern about cleanup of SSFL to background radiation levels and upholding the AOC. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 49: William Clark

Dear Stephanie,

I'm not sure if this is the proper forum to express a thought I have for several years now regarding the future use of Santa Susanna Field lab, but here it is.

The property in question is an incredibly beautiful paradise in the Santa Mountains and though the area is considered tentatively uninhabitable, it would none-the-less make a world class Senior Citizen community and recreation Mecca. Leisure Village in Camarillo would pale in comparison.

Just some thoughts,

Sincerely,



William Clark



49-1

49-1

This EIS addresses those portions of SSFL for which DOE has cleanup responsibility, Area IV and the NBZ. However, DOE does not own the land; it is owned by The Boeing Company (Boeing). Boeing has stated its intent on maintaining the land as open space and formalized that intent. In 2017, Boeing and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

Commenter No. 50: Teena A. Takata

March 16, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: DOE/EIS-0402, Area IV and Northern Buffer Zone
Santa Susana Field Laboratory

Dear Ms. Jennings,

I recently filed the attached email with the County Board of Supervisors related to their March 14, 2017 agenda item demanding full support of the AOC's. After they processed the DOE extension period for comments on the DEIS, they adjusted the agenda item to ask for studies, and backed off slightly from their original position in the agenda.

I find ten extra years of shipping dirt off the site that normally would be deemed fine under usual cleanup standards, combined with an inability to replace the soil due to lack of "clean" soil as an incomprehensible action. The "cleanup" of inert chemicals has no benefit whatsoever for the community or the DOE portion of the SSFL, and only creates detriments from traffic and pollution from that "extra" cleanup, further damage to the site due to lack of adequate soil replacement, and the extraordinary cost of that "extra" cleanup that provides no actual benefits. This comment is only strengthened by the long term use of the property as open space that Boeing has promised for many years.

I fully support the Conservation of Natural Resources approach as providing a reasonable cleanup, and as protective of human health and the wildlife that lives on the site. The Cleanup to Revised LUT Values would also be acceptable, but the AOL LUT Values have no valid purpose, and in fact, the California Courts have struck down SB 990, the law the AOC's were based on.

Please accept this cover letter and the attached memo to the Los Angeles County Board of Supervisors as my personal comments on the DOE Draft EIS.

Sincerely,



Teena A Takata



50-1

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DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 50 (cont'd): Teena A. Takata

Teena Takata

From: Teena Takata
Sent: Monday, March 13, 2017 10:52 PM
To: 'executiveoffice@bos.lacounty.gov'
Cc: 'jdegonia@lacbos.org'; 'barri.girvan@sen.ca.gov'; 'eveline.bravo-ayala@sen.ca.gov'; 'ematos@bos.lacounty.gov'; 'esinger@lacbos.org'
Subject: Regarding Item 14, regarding the DOE EIS at the Santa Susana Field Lab on the March 14 agenda:
Attachments: DOE The Truck Slide Final Hearing Presentation 2-20-17.pdf

Hi Jarrod and others,

I saw the changes to the Board of Supervisors agenda item relating to the SSFL and am very disappointed to see language requiring compliance with the AOCs. As the site has been studied, many problems have been identified that prove the AOC's to be impossible to comply with, and the gigantic cost of removing non-toxic "chemicals" has been quantified. Many people in the community have attended hours and hours of educational meetings with presentations by scientists, epidemiologists, attended tours, PPG and CAG meetings, and read a multitude of environmental documents relating to the SSFL cleanup. Those who have taken time to educate themselves understand what a disaster the AOC's are for the site and nearby communities. Please pass this out to key people involved in this decision.

It is regrettable that our Los Angeles County Supervisors seem to scorn NEPA, which like CEQA, requires a review of the full range of alternatives. While spending 10 years removing the non-harmful chemicals that are part of the AOC's dangerously over-aggressive "background standard" may be important to keep funding going into Dan Hirsch's "charity," it is indecent to subject our lungs, homes, and communities to the traffic and pollution it will cause.

The DOE truck graphic, presented at the public hearings (attached), makes it painfully clear. The chemicals that typically are subject to cleanup (on projects other than the SSFL) are shown as yellow, red, or blue. Those hundreds of thousands of cubic yards of "green" soil are "contaminated" by fiat, in name only, by the application of the arbitrary "background" cleanup "standard." The soils are not contaminated under conventional rules; they are "contaminated" only under the cleanup to "background" rule that was contrived to mimic the discredited SB 990 California law, which was long ago ruled unconstitutional by the courts.

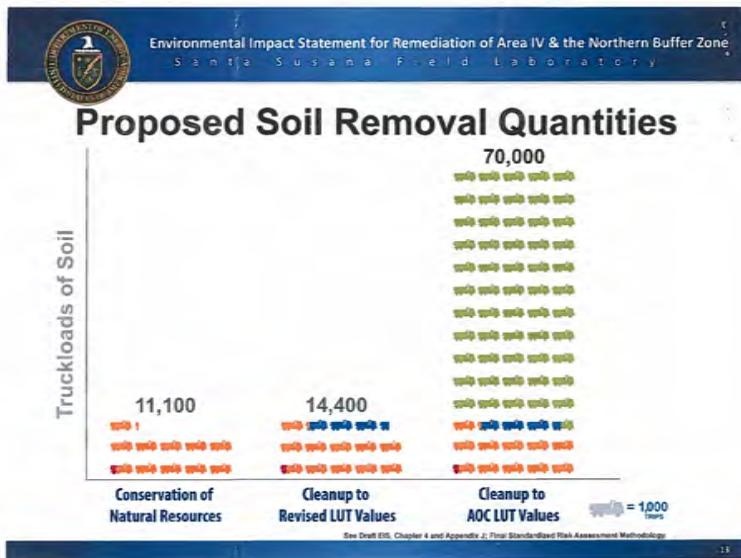
I drove behind about 4 haul off trucks on a recent morning at about 5am on Valley Circle Road going through the Lake Manor area before they turned up Woolsey Canyon Road. Presumably they were empty since they were going to the site. They move at about 10-14 miles per hour on that windy road. Wait until we have them going in and out every five minutes for ten years (for no good reason), it will be a real mess.

I urge the Supervisors, at a bare minimum, to ask an impartial, intelligent staff person to at least read the executive summary of the EIS and file a staff report, so the Supervisors will better understand what they are voting on. And the Supervisors should vote after they understand what the cleanup entails. We all want the SSFL land cleaned up. But there is no reason to strip the soil away pretending that we are conforming to a standard that is fundamentally impossible. The DEIS provides an outstanding analysis to explain and analyze what cleanup is needed, and what cleanup is based on a site specific technicality. Should we pretend to conform to an impractical, non-standard "standard" at the cost of 30 years of truck traffic, and their related negative impacts, including huge taxpayer costs? Why?

Teena Takata, CPA
 Chatsworth, CA

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Commenter No. 50 (cont'd): Teena A. Takata



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Commenter No. 51: Rochelle Lapidès

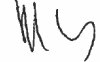
March 27, 2017

To Whom It May Concern:

Re: Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer of the Santa Susana Field Laboratory (DOE/EIS-0402).

As a resident of the Santa Susana Knolls, I was dismayed to find out at the most recent Community Meeting you held in Simi Valley that: number one, the Department of Energy wants to renege on its promise to completely clean up the nuclear mess in our community; and number two that, if I am correct, no actual study had been done to show how far and in what manner the contamination is spreading. How can we have faith in government if they want to cut back on their clean-up when they don't know what the result will be?

Sincerely,



Rochelle Lapidès



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Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Also, please refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for a better understanding of the current condition of Area IV.

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EPA, sampled for radionuclides (HGL 2012b), and DOE, under California DTSC oversight, sampled for presence of chemicals beyond the boundaries of Area IV. The extent of soil and groundwater contamination has been defined and is understood (Area IV Chemical Data Summary Report [CDM Smith 2017] and *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* [CDM Smith 2018a]). In addition, California DTSC released a study paper in May 2017 (DTSC 2017a) that describes the extent of contamination adjacent to Area IV. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 52: Patricia Merchant

March 18, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

RE: SSFL Draft Environmental Impact Statement

Dear Ms. Jennings:

In response to the Department of Energy's Draft Environmental Impact Statement regarding the Santa Susana Field Laboratory (SSFL), none of the proposed alternatives will clean up the SSFL to the standards that DOE committed to in the Agreement on Consent. To not clean up this area to the standards that you committed to, is a violation of that agreement. The SSFL site has already adversely affected the lives of many of the people in this community and will continue to do so without proper and complete clean-up. I grew up in the San Fernando Valley and was a child at the time of the accident. I am now 67 years old with children and grandchildren living in Simi Valley. We have waited a VERY long time for a solution to this mess. Please honor the commitment you made to clean-up this site.

Respectfully,



Patricia Merchant


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cont'd

52-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.)

52-2 All of the action alternatives would leave concentrations of chemicals or radionuclides that are protective of human health and the environment for the intended use of the site as open space. Regarding your concern about affecting people in the community, please refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information on these subjects. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 53: Susan Silver

Susan Silver
Naturalist and Educator

March 21, 2017

Ms. Stephanie Jennings
NEPA Document Manager
U. S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

RE: Comments for the SSFL DOE Area 4/Northern Buffer Zone Draft EIS

Dear Ms. Jennings:

I'm writing you not only as a naturalist and educator who has lead nature walks and activities for more than 23 years but also as someone whose mother lives a few minutes away from the Santa Susana area.

I strongly favor the **Conservation of Natural Resources** alternative in the DEIS. This balanced alternative offers a cleanup to a risk-based suburban residential standard and is the least damaging to SSFL natural, cultural, and historical resources and to adjacent communities.

This alternative solution uses a risk-based standard, based on prospective land use, which is standard operating procedure that the EPA uses to govern the clean-up of polluted sites throughout the country.

This alternative would help ensure that all clean-up activities would be implemented to minimize a) traffic (especially from trucks) to and from SSFL and b) the transport of contaminated materials through the residential, institutional and commercial areas of Los Angeles (my mother lives in a nearby West Hills, assisted-living community for example).

This alternative would support the inclusion of the entire SSFL in a National Monument ideally administered by the National Park Service, in order to protect the cultural and natural resources as well as preserve the important wildlife corridor through the Simi Hills between the Santa Monica Mountains and Susana Mountains (Alternatively, the site could be protected as a wildlife refuge or park administered by some other agency.) Of course any areas disturbed by clean-up activities should be restored by replanting the areas using native plants, which would be maintained and monitored until they are established.

I'm aware there are other more extreme, expensive proposals for cleanup that would involve transporting large amounts of contaminated soil on public streets and highways -- many years' worth of trucks hauling away many hundreds of thousands, if not millions, of cubic yards. Consequently, the extreme proposals would a) pose a serious threat to public health and b) unnecessarily destroy wildlife and habitats as well as important Native American cultural resources.

Not only are such destructive and expensive proposals completely out of keeping with myriad toxic waste cleanups that have been deemed sufficient and cost-effective in other U.S. locations, these proposals are inconsistent with the end use of the SSFL property as open space.

In conclusion, I strongly urge the Department of Energy to select the **Conservation of Natural Resources** alternative in the DEIS.

Respectfully,



Susan Silver
Naturalist and Educator, Los Angeles

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DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also note that DOE does not own the property in Area IV or the NBZ and cannot determine the ultimate land use for the property. As discussed in Chapter 1, Section 1.5, of the EIS, the property owner, Boeing, intends to preserve the land as open space for the public's benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

Commenter No. 54: Sam Cohen
Santa Ynez Band of Chumash Indians

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MIKE LOPEZ, COMMITTEE MEMBER



March 8, 2017

Stephanie Jennings
NEPA Document Manager
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

RE: Santa Susana Field Laboratory (SSFL)
Area IV and Northern Buffer Zone Draft EIS (DEIS)
Comment deadline: March 14, 2017

Dear Ms. Jennings:

The Santa Ynez Band of Chumash Indians ("Chumash" or "Tribe") thanks you and DOE for the opportunity to provide comments on the DOE DEIS. DOE is covered by Executive Order 13175 as reaffirmed by that Presidential Memorandum on Tribal Coordination dated November 5, 2009 that reaffirmed Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments," and emphasized the importance of strengthening government-to-government relationships with Native American tribes.

In addition, DOE is an original signatory to that MOU REGARDING INTERAGENCY COORDINATION AND COLLABORATION FOR THE PROTECTION OF INDIAN SACRED SITES (2012) and the Action Plan to Implement the Memorandum of Understanding (MOU) Regarding Interagency Coordination and Collaboration for the Protection of Indian Sacred Sites dated March 5, 2013. The Tribe believes the MOU and Action Plan should be applied to the SSFL site to engage DOE and Interior as signers to the MOU and the National Park Service as part of Interior. The Tribe hereby requests that DTSC be added as a Non-federal Partner under Section IV(9).

NEPA REQUIRES AN ANALYSIS OF CULTURAL RESOURCES IN THE DEIS

Pursuant to Council on Environmental Quality NEPA Regulations, the definition of "Effects" requires that the EA/EIS must address historic and cultural resources. (40 CFR 1508.8). Adverse and beneficial effects must be addressed in NEPA documents. (40 CFR

54-1 Indian sacred sites Traditional cultural resources are described in Chapter 3, Section 3.11, Appendix B, and Appendix F of the Final EIS. Note that the MOU referenced in the comment expired on December 31, 2017. DOE will continue to consult with the Santa Ynez Band of Chumash Indians on a government-to-government basis on an account of this Tribe's status as a federally recognized Tribe. Regarding the role of the Department of the Interior, National Park Service, DOE invited the NPS to participate in the Section 106 consultation for this undertaking, and the NPS is participating as a consulting party. Regarding the role of DTSC, DOE invited DTSC to participate in the Section 106 consultation for this undertaking, including participating in the development of the NHPA Section 106 Programmatic Agreement. DTSC declined to participate. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for information regarding the process that will be used to determine exemptions.

54-2 The Final EIS does analyze potential impacts to cultural resources. Concerning the affected environment, Chapter 3, Section 3.11 presents a summary of the prehistory and history of the area and describes the state of knowledge regarding cultural resources in Area IV and the NBZ at SSFL. Appendix F provides more detailed background on cultural resources in the region and at SSFL. Cultural resources in Area IV and the NBZ have been identified through decades of surveys and research at SSFL, resulting in a complete and intensive inventory of these areas. DOE considered the results of this research with the intention of identifying cultural resources that may be impacted by the cleanup efforts (refer to Chapter 3, Section 3.11.2.3, and Appendix F, Section F.2). In addition to surveys, DOE has conducted extended Phase I testing to evaluate the NRHP eligibility of 10 archaeological sites in the APE (refer to Appendix F, Section F.2.3). This program of limited subsurface excavation was developed in consultation with SHPO and EIS cooperating agencies, including the federally recognized Santa Ynez Band of Chumash Indians and other tribes. The Final EIS also acknowledges that additional efforts by NASA, the Santa Ynez Band of Chumash Indians, other tribes, and others may result in the designation of one or more NRHP-eligible traditional cultural properties and/or archaeological districts that overlap with the APE.

Concerning analysis of potential impacts, as presented in Chapter 4, Section 4.11 of this Final EIS, DOE has analyzed the impacts of the proposed action and alternatives on cultural resources, including historic properties and traditional cultural resources. The analysis is based on the location of known archaeological resources throughout

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Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

1508.8). The "Affected Environment" section of an EA/EIS should provide background information on the prehistory and history of the area and describe known historic and cultural resources that may be affected by the project. (40 CFR 1502.15). The "Environmental Consequences" section of the EA/EIS must address effects to historic or cultural resources that could result from the proposed action and each alternative. (40 CFR 1502.16(f)).

This DEIS defers all analysis of cultural resources until the NHPA 106 process is completed and therefore it is impossible to comment on cultural resources in this DEIS.

THE TRIBE THEREFORE RESERVES THE RIGHT TO COMMENT ON CULTURAL RESOURCES AT ANY TIME THROUGHOUT THE NHPA 106 PROCESS AND IN ANY SUBSEQUENT DRAFT OR FINAL EIS.

IN ADDITION, THE TRIBE REQUESTS AN EXTENSION OF TIME TO MAKE SUCH COMMENTS AT ANY TIME THROUGHOUT THE NHPA 106 PROCESS AND IN ANY SUBSEQUENT DRAFT OR FINAL EIS.

In the absence of any analysis of cultural resources in the DEIS, the Tribe, therefore, reiterates its scoping comments from March 30, 2014:

(1) The EIS Must Address Cultural Resources (copied from <http://www.npi.org/NEPA/impact>)

Cultural resources are referred to in different ways at different points in the CEQ regulations. The regulatory definition of the term "human environment" at 40 CFR 1508.14 –impacts on the quality of the human environment being the subjects of any EIS – includes "the natural and physical environment and the relationship of people with that environment." The definition of "effects" at 40 CFR 1508.8 – as in "effects on the quality of the human environment" – includes changes in the human environment that are "aesthetic, historic, cultural, economic, (or) social."

The regulatory definition of the word "significantly" at 40 CFR 1508.27 – as in "major federal action significantly affecting the quality of the human environment" – includes as measures of impact intensity:

- Impacts on an area's unique characteristics, such as "historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, and ecologically critical areas" (40 CFR 1508.27(b)(3)).
- Impacts on "districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places" and on "significant scientific, cultural, or historical resources" (40 CFR 1508.27(b)(8)).

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Area IV and the NBZ and on the assumption that DOE and DTSC can agree on areas of exemption that allow avoidance of, or minimization of impacts to, NRHP-eligible cultural resources while still being protective of human health. It is true that the outcome of these consultations is not known at this time. In addition, because of the nature of archaeological sites, there is always the possibility that activities associated with cleanup will inadvertently encounter previously unknown and unrecorded archaeological sites. For this reason, the NHPA Section 106 Programmatic Agreement currently being developed by DOE will include procedures for the development of a monitoring plan as well as an inadvertent discovery plan that addresses unanticipated archaeological resources, human remains, or burial-related artifacts.

Because of the government-to-government relationship between DOE and the federally recognized Santa Ynez Band of Chumash Indians, DOE will continue to work with the tribe to ensure its concerns regarding potential effects of cleanup Area IV and NBZ are considered.

As described in Chapter 3, Section 3.11.1, of this EIS, DOE defines cultural resources for the purposes of impact analysis broadly to encompass definitions of cultural resources in NEPA and the CEQ NEPA implementing regulations (see Chapter 3, Section 3.11.1, including the text box titled "Types of Cultural Resources"). Impacts on this broadly defined category of resources are addressed in Chapter 4, Section 4.11, of this EIS. Proposed methods to avoid, minimize, or mitigate impacts are described in Chapter 6, Sections 6.1 and 6.2.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

Clearly, impacts on cultural resources are to be addressed in an EIS. Note that it is not just impacts on historic properties that should be addressed. The regulations use "historic" and "cultural" in parallel, not as synonyms.

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(2) **Record of Decision Must Mitigate any Impacts to Cultural Resources** (copied from <http://www.npi.org/NEPA/impact>)

Once the EIS analysis has resulted in a draft environmental impact statement (DEIS), it is subjected to public and agency review, and comments are addressed – this may require further analysis. Then, assuming the project has not been abandoned, or so changed that a supplemental DEIS is needed, a final EIS (FEIS) is prepared and published. The FEIS is considered in making the agency's decision about whether and how to proceed with the action that was the subject of the EIS. This decision is recorded in a Record of Decision (ROD). According to 40 CFR 1505.2, the ROD must:

- State what the decision was.
- Identify all alternatives considered.
- Specify the alternative or alternatives considered to be "environmentally preferable." (Note that the agency does not have to select the environmentally preferable alternative, but it does have to discuss what it is.)
- Identify and discuss the factors balanced in making the decision (whether for or against the environmentally preferable alternative).
- State whether "all practicable means to avoid or minimize environmental harm . . . have been adopted, and if not, why they were not."

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As required by CEQ's and DOE's NEPA implementing regulations, DOE will describe the proposed alternatives, announce its decisions, and discuss any adverse impacts and mitigating actions in the Record of Decision for this Final EIS. The Record of Decision will also discuss the Section 106 Programmatic Agreement being developed in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties.

Having notified the world of its decision, the agency implements it. In doing so, it must carry out any mitigation, i.e., "means to avoid or minimize environmental harm," it has said in the ROD or EIS that it will carry out (40 CFR 1505.3).

(3) **Deferral of Mitigation does not Comply with NEPA** (copied from <http://www.npi.org/NEPA/impact>)

Deferral. With respect to historic properties, a very common problem is "deferral," in which the agency:

- Acknowledges that it does not know much about what effects there may be on historic properties (often because such properties have not yet been identified); but
- Says that whatever effects there may be, NHPA Section 106 review (of the National Historic Preservation Act), to be performed later, will take care of them; and

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DOE has analyzed potential environmental impacts to cultural resources in this Final EIS. As described in Chapter 3, Section 3.11.2.3, and Appendix F, Section F.2, of this EIS, Area IV and the NBZ have been intensively surveyed for cultural resources with the intention of identifying cultural resources that may be impacted by the cleanup efforts. Potential impacts of the proposed alternatives are described in Chapter 4, Section 4.11, under each alternative, and summarized in Section 4.11.4. Proposed methods to avoid, minimize, or mitigate impacts are described in Chapter 6, Sections 6.1 and 6.2.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

- Concludes that therefore, whatever alternative is decided on, impacts on historic properties will not be a problem.

Considering environmental impacts *after* a decision has been made defeats NEPA's purpose of considering impacts in *preparing* to make decisions. It also almost guarantees last-minute conflicts between project implementation and historic preservation.

Failure to consider things that are not historic properties. With respect to other kinds of cultural resources, a common problem is that they are not considered at all. Historic properties, or even more narrowly, archeological sites, are sometimes the only things discussed in the "cultural resource" part of an EIS. If social impacts are considered, they are often considered only terms of easily quantifiable socioeconomic variables like population, employment, and use of public services. The result is that impacts on many classes of cultural resource simply are not identified or considered in deciding whether significant impacts may occur.

(4) Significant Negative Unmitigated Impacts to Sacred Sites and Cultural Resources by Soil Cleanup to Background:

Indian Sacred Site and Traditional Cultural Property: The tribe has already designated all of the NASA administered property as a sacred site under E.O. 13007. The Tribe has also made a similar EO 13007 designation for the areas leased to DOE.

Archeological Resources: The proposed cleanup of the Burro Flats site (CA-VEN-1072); could result in *significant, negative, local, and long-term* impacts to the site and would constitute an *adverse effect* under Section 106. The proposed cleanup of newly discovered and previously undiscovered archeological sites found to be NRHP-eligible could be a *significant, negative, local, and long-term* impact on archeological resources, thus resulting in a finding of *adverse effect* under Section 106.

Deferral of eligibility determination: A determination of eligibility all newly discovered archeological sites in consultation with the SHPO and the federally recognized tribes, needs to be completed before cleanup begin if any site is going to be affected by soil cleanup activities.

Deferral of boundary research as to VEN-1072 and VEN-1803: Additional boundary research on Area IV is required to conclude that any avoidance of excavation within the boundaries of Burro Flats (CA-VEN-1072) would diminish or eliminate adverse impacts to known archeological sites and reduce the impacts to *negligible, negative, local, and long term* and could result in a finding of *no adverse effect* under Section 106.

Deferral of additional testing as to unknown archaeological deposits: Additional subsurface testing is required to conclude that reducing the amount of excavation on newly discovered archeological deposits (commonly referred to as "inadvertent or

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54-7 See response to comment 54-4 above.

54-8 Chapter 3, Section 3.11.2.3.4, Appendix B, and Appendix F of this Final EIS describes traditional cultural resources within the APE, including Indian sacred sites and traditional cultural properties. Measures provided in Chapter 6, Sections 6.1 and 6.2, and being developed through the NHPA Section 106 Programmatic Agreement, present DOE's approach for addressing adverse effects on traditional cultural resources.

Site CA-VEN-1072 is a large, NRHP-eligible archaeological site with numerous components spread over a large area. Although DOE understands that sites can extend for long distances and may be related to each other, CA-VEN-1072 and its features, as defined in site records, appears to lie completely within Area II (La Monk 1953, Grant 1965; Knight 2001; see also Appendix F); which is outside of DOE's area of responsibility. However, DOE acknowledges that NASA is developing a proposal for an NRHP-eligible Burro Flats Archaeological District to the California SHPO that includes several archaeological sites within DOE's APE in Area IV, and the Santa Ynez Band of Chumash Indians is developing a proposal for an NRHP-eligible Simi Hills Archaeological District that includes all the recorded archaeological sites in DOE's APE (including CA-VEN-1803). The NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will establish procedures for addressing adverse effects on historic properties, including any archaeological districts that are determined eligible for the NRHP.

See response to comment 54-2 above regarding efforts made to identify and evaluate cultural resources within the APE, including extended Phase I testing. The NHPA Section 106 Programmatic will establish procedures for making eligibility determinations on unevaluated sites, as needed, and inadvertent discoveries, along with procedures to assess effects and resolve adverse effects if they are determined eligible for the NRHP.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

accidental discoveries”) could minimize the impact if the newly identified sites were avoided, thus reducing the impacts to *minor, negative, local, and long-term* impacts from excavation.

(5) Failure to Address Executive Order 13007

On March 5, 2014, the Santa Ynez Band of Chumash Indians, a federally recognized tribe (“Tribe”), designated the DOE portion of the SSFL as an Indian sacred site pursuant to Executive Order 13007. This Indian sacred site also includes the former Rocketdyne and now Boeing portion of SSFL and the Tribe is open to discussing the exact boundaries at a later date.

E.O. 13007 requires Federal land managing agencies to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites. It also requires agencies to develop procedures for reasonable notification of proposed actions or land management policies that may restrict access to or ceremonial use of, or adversely affect, sacred sites.

Sacred sites are defined in the executive order as “any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site.” There is no review of such determinations by a Federal agency.

It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site. However, in those instances where an undertaking may affect a historic property that is also considered by an Indian tribe to be a sacred site, the Federal agency should, in the course of the Section 106 review process, consider accommodation of access to and ceremonial use of the property and avoidance of adverse physical effects in accordance with E.O. 13007.

The Advisory Council on Historic Preservation (ACHP) has explained “The Relationship Between Executive Order 13007 Regarding Indian Sacred Sites and Section 106,” <http://www.achp.gov/eo13007-106.html>

To the extent that the requirements of the executive order and ACHP’s regulations are similar, Federal agencies can use the Section 106 review process to ensure that the requirements of E.O. 13007 are fulfilled. For example, E.O. 13007 requires that agencies contact Indian tribes regarding effects and the Section 106 regulations require consultation with Indian tribes to identify and resolve adverse effects to historic properties.

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As discussed in Chapter 3, Section 3.11.2.3.4 of this Final EIS, the Santa Ynez Band of Chumash Indians filed paperwork nominating the entire SSFL to be included in the *State of California Native American Heritage Commission Sacred Lands Inventory* (NAHC 2014), and also notified DOE of its identification of a portion of SSFL as an Indian sacred site for consideration consistent with Executive Order 13007, *Indian Sacred Sites*. While DOE does not own property at Area IV or the NBZ, DOE is working with the Native American tribes with ties to the SSFL area to preserve the cultural resources and the sacred nature of Area IV and the NBZ.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

Consultation regarding the identification and evaluation of historic properties of religious and cultural significance to an Indian tribe could include identification of those properties that are also sacred sites. Similarly, consultation to address adverse effects to such historic properties/sacred sites could include discussions regarding access and ceremonial use.

(6) Failure to address the DOE Site as a Traditional Cultural Property (TCP) eligible for protection on the National Register:

National Register Bulletin No. 38 (hereinafter referred to as "NPS Bull. No. 38"), Guidelines for evaluating and Documenting Traditional Cultural Properties (1990; revised 1992; 1998) under NHPA
<http://www.nps.gov/nr/publications/bulletins/pdfs/nrb38.pdf>

A. Locations for traditional ceremonies are defined as a TCP: NPS Bull No. 38, p. 1, provides:

The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include: ***

• a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice;

B. Mountain tops and rock outcroppings like at SSFL are TCP's: NPS Bull. No. 38, p. 2, provides:

Traditional cultural properties are often hard to recognize. A traditional ceremonial location may look like merely a mountaintop, a lake, or a stretch of river; a culturally important neighborhood may look like any other aggregation of houses, and an area where culturally important economic or artistic activities have been carried

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54-10 As discussed in Chapter 3, Section 3.11.2.3.4 of this Final EIS, DOE acknowledges that the Santa Ynez Band of Chumash Indians has identified the entire SSFL as a Native American sacred site (referred to as the Santa Susana Sacred Sites and Traditional Cultural Property). The Final EIS also acknowledges that additional efforts by NASA, the Santa Ynez Band of Chumash Indians, other tribes, and others may result in the designation of one or more NRHP-eligible traditional cultural properties that overlap with the APE. Measures provided in Chapter 6, Sections 6.1 and 6.2, and being developed through the NHPA Section 106 Programmatic Agreement, present DOE's approach for addressing adverse effects on traditional cultural properties.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

out may look like any other building, field of grass, or piece of forest in the area. As a result, such places may not necessarily come to light through the conduct of archeological, historical, or architectural surveys. The existence and significance of such locations often can be ascertained only through interviews with knowledgeable users of the area, or through other forms of ethnographic research.

C. DOE must engage specialists as part of its TCP study: NPS Bull. No. 38, p. 10, provides:

In general, the only reasonably reliable way to resolve conflict among sources is to review a wide enough range of documentary data, and to interview a wide enough range of authorities to minimize the likelihood either of inadvertent bias or of being deliberately misled. Authorities consulted in most cases should include both knowledgeable parties within the group that may attribute cultural value to a property and appropriate specialists in ethnography, sociology, history, and other relevant disciplines.⁷

D. Specific events like the Solstice ceremony at SSFL qualify as TCP: NPS Bull. No. 38, p. 11, provides:

For example, the National Register defines a "site" as "the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archeological value regardless of the value of any existing structure."⁹ Thus a property may be defined as a "site" as long as it was the location of a significant event or activity,

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Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

regardless of whether the event or activity left any evidence of its occurrence. A culturally significant natural landscape may be classified as a site, as may the specific location where significant traditional events, activities, or cultural observances have taken place. A natural object such as a tree or a rock outcrop may be an eligible object if it is associated with a significant tradition or use. A concentration, linkage, or continuity of such sites or objects, or of structures comprising a culturally significant entity, may be classified as a district.

E. Native American ceremonies qualify as TCP: NPS Bull. No. 38, p.15, provides:

National Register guidelines stress the fact that properties can be listed in or determined eligible for the Register for their association with religious history, or with persons significant in religion, if such significance has "scholarly, secular recognition." 13 The integral relationship among traditional Native American culture, history, and religion is widely recognized in secular scholarship.¹⁴ Studies leading to the nomination of traditional cultural properties to the Register should have among their purposes the application of secular scholarship to the association of particular properties with broad patterns of traditional history and culture. The fact that traditional history and culture may be discussed in religious terms does not make it less historical or less significant to culture, nor does it make properties associated with traditional history and culture ineligible for inclusion in the National Register.

F. Lack of use does not make a property TCP ineligible: NPS Bull. No. 38, p. 18, provides:

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Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

The fact that a property may have gone unused for a lengthy period of time, with use beginning again only recently, does not make the property ineligible for the Register. For example, assume that the Indian tribe referred to above used the mountain peak in prehistory for communication with the supernatural, but was forced to abandon such use when it was confined to a distant reservation, or when its members were converted to Christianity. Assume further that a revitalization of traditional religion has begun in the last decade, and as a result the peak is again being used for vision quests similar to those carried out there in prehistory. The fact that the contemporary use of the peak has little continuous time depth does not make the peak ineligible; the peak's association with the traditional activity reflected in its contemporary use is what must be considered in determining eligibility.

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(7) Traditional Cultural Landscapes must also be included in Section 106 consultations and the EIS

Traditional cultural landscapes, because they are often a property type such as a district or site, are identified in the same manner in the Section 106 process as other types of historic properties of religious and cultural significance to Indian tribes or Native Hawaiian organizations. The regulations at 36 CFR Section 800.4 outline several steps a federal agency must take to identify historic properties. In summary, to determine the scope of identification efforts, a federal agency, in consultation with the State Historic Preservation Officers (SHPO)/Tribal Historic Preservation Officer (THPO), must:

1. Determine and document the area of potential effect for its undertaking;
2. Review existing information; and,
3. Seek information from consulting parties including Indian tribes or Native Hawaiian organizations.

Based on the information gathered through these efforts, the federal agency, in consultation with the SHPO and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by the undertaking, develops and implements a strategy to identify historic properties within the area of potential effects. Identification efforts may include background research, oral history interviews, scientific analysis, and field investigations.
<http://www.achp.gov/natl-qa.pdf>

54-11

54-11

DOE has not been provided information relating to any specific, stand-alone traditional cultural landscapes on DOE's portion of SSFL. However, Chapter 4, Section 4.11 of this Final EIS describes how soil remediation would result in changes to the setting and general landscape (e.g., topography, soil color, vegetation) associated with traditional cultural resources at Area IV and the NBZ. DOE will continue to consult with the Santa Ynez Band of Chumash Indians on a government-to-government basis to consider their interests and concerns about the proposed cleanup.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

There is no single defining feature or set of features that comprise a traditional cultural landscape. Such places could be comprised of natural features such as mountains, caves, plateaus, and outcroppings; water courses and bodies such as rivers, streams, lakes, bays, and inlets; views and view sheds from them, including the overlook or similar locations ; vegetation that contributes to its significance; and, manmade features including archaeological sites; buildings and structures; circulation features such as trails; land use patterns; evidence of cultural traditions, such as petroglyphs and evidence of burial practices; and markers or monuments, such as cairns, sleeping circles, and geoglyphs. <http://www.achp.gov/natl-qa.pdf>

Based on such research, the ACHP TRADITIONAL CULTURAL LANDSCAPES ACTION PLAN advises as follows:

The ACHP, as the agency with responsibility for overseeing the Section 106 review process, and DOI, through the National Park Service (NPS), as the agency with responsibility for overseeing the National Register of Historic places, should provide leadership in addressing Native American cultural landscapes in the national historic preservation program. Together, the ACHP and NPS should:

--Promote the recognition and protection of Native American traditional cultural landscapes both within the federal government and the historic preservation community as well as at the state and local levels, and,

--Address the challenges of the consideration of these historic properties in the Section 106 review process as well as in NEPA reviews. <http://www.achp.gov/pdfs/native-american-traditional-cultural-landscapes-action-plan-11-23-2011.pdf>

(8) U.N. Declaration on the Rights of Indigenous Peoples must now be followed after December 2010

In December 2010, the United States announced support for the **United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)**. In announcing this support, President Obama stated: "The aspirations it affirms—including the respect for the institutions and rich cultures of Native peoples—are one we must always seek to fulfill...[W]hat matters far more than any resolution or declaration – are actions to match those words." The UNDRIP addresses indigenous peoples' rights to maintain culture and traditions (Article 11); and religious traditions, customs, and ceremonies (Article 12); to participate in decision making in matters which would affect their rights (Article 18); and to maintain spiritual connections to traditionally owned lands (Article 25).

The ACHP will now incorporate UNDRIP in the Section 106 review process:

While the Advisory Council on Historic Preservation's (ACHP) work already largely supports the United Nations Declaration on the Rights of Indigenous Peoples, additional and deliberate actions will be taken to more overtly support the Declaration. The Section 106 review process provides Indian tribes and Native Hawaiian organizations (NHOs) with a very important opportunity to influence federal decision making when properties of religious and cultural significance may be threatened by proposed federal actions. While federal agencies are required to consult with Indian tribes and NHOs and to take their

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Thank you for bringing this to DOE's attention. DOE will continue to consult with the Santa Ynez Band of Chumash Indians on a government-to-government basis, as well as with other tribes with a demonstrated interest in the undertaking, regarding their interests and concerns about the proposed cleanup.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

comments into account in making decisions in the Section 106 review process, adding the principles of the Declaration to that consideration may assist federal agencies in making decisions that result in the protection of historic properties of religious and cultural significance to Indian tribes and NHOs. <http://www.achp.gov/docs/UN%20Declaration%20Plan%203-21-13.pdf>

9. Official recognition in the EIS need to be made of the areas surrounding Burro Flats

While the Southern half of Area II contains the pictographs and additional 16 sites, Area IV of SSFL needs additional investigation, including, without limitation:

- a. Geography—this areas contains numerous flat areas that would be suitable camp sites;
- b. Areas of food—this areas contains forests and riparian areas that could be utilized in the gathering of food;
- c. Support for ceremonial area in the Southern half of Area IV—It is not inconceivable that the Northern half of the SSFL site provided support for the ceremonies in the Southern half of SSFL;
- d. Separate areas for different tribes—if SSFL was an inter-tribal gathering place, then each tribe would have congregated separately in different parts of the site.

10. Subsurface testing is required.

Pedestrian surveys are of limited utility and never alone are sufficient when there are known areas of habitation or ceremony. We are informed that DOE has recently completed a Phase I Pedestrian Survey of the site. While such Phase I is an excellent first step, we request additional subsurface archaeological testing for all areas scheduled for any excavation.

If the project is in a region where there are many sites, there may be reason to suspect that buried sites may be present that went undetected during the survey. If the soils profile of the project location shows that heavy erosion has washed away soils then it may explain the absence of cultural resources. However, if the soils profile is depositional then there may be a need to conduct additional subsurface testing, particularly in areas where ground disturbance is planned. In archaeological terminology, this is referred to as "Extended Phase I" testing because it is an intermediate step between Phase 1 (survey), and Phase 2 (controlled excavation to assess the significance of a site). Extended Phase I testing often done by excavating a small pit with a shovel and screening the excavated soil through steel mesh ("shovel test pit" or "STP"). If it is considered to be necessary that a large amount of soil should be examined at deeper levels, then backhoes are sometimes used and informal sampling procedures are often employed while screening the backdirt.

Sometimes the lead agency will argue that archaeological survey is not warranted for a particular project or there may be factors that justify additional investigation even though a Phase I study has been completed with negative results. Following is a list of environmental and cultural factors that should be considered when assessing the overall

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See response to comment 54-2 above regarding efforts made to identify cultural resources within the APE. In particular, Chapter 3, Section 3.11.2.3.2 of this Final EIS describes the Burro Flats Painted Cave site complex, and acknowledges that NASA is developing a proposal for an NRHP-eligible Burro Flats Archaeological District to the California SHPO that includes several archaeological sites within DOE's APE in Area IV. The NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will establish procedures for addressing adverse effects on historic properties, including the Burro Flats Archaeological District if it is determined eligible for the NRHP.

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54-14

As described in Chapter 3, Section 3.11.2.3.2 and Appendix F, Section F.2.3, of this Final EIS, DOE developed and implemented an extended phase 1 testing program to evaluate the NRHP eligibility of 10 archaeological sites in the APE. The 10 sites were chosen based on: (1) the extent of the contamination known at the time the testing program was designed; (2) sites where NRHP eligibility was unclear; and (3) consultation with Native American representatives. This program of limited subsurface excavation was developed in consultation with SHPO and EIS cooperating agencies, including the federally recognized Santa Ynez Band of Chumash Indians, as well as non-federally recognized tribes. Additionally, the NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will include procedures for the development of a monitoring plan and an inadvertent discovery plan that spells out steps to follow if cleanup activities inadvertently encounter archaeological resources, human remains, or burial-related artifacts.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

cultural sensitivity of the SSFL. (Please note that this list is not exhaustive and each factor must be weighted both individually and collectively on a case-by-case basis.)

- a. Areas with high viewshed or visibility such as or ridgelines, peaks, ledges, outcrops, benches, or prominent hills; and
- b. Areas with a relatively high density of sites in the vicinity; and
- c. Areas where past ethnographic studies have revealed associated placenames. Keep in mind that placenames do not always refer to places where evidence of past cultural activity exists; and
- d. Areas near known sites. Mapped boundaries of sites most frequently reflect only cultural residue that was visible on the surface when the site was recorded and do not necessarily reflect the actual extent of the site. In addition, loci such as cemeteries or other areas may be adjacent to or nearby but separate from the main habitation; and
- e. Areas near known rock art sites or rocky outcroppings of the type where rock shelters and art have traditionally been located; and
- f. Areas in or near known gathering areas; and
- g. Though all sites are potentially worthy of protection, named, ethnohistorically documented village sites are of the highest priority and therefore warrant the greatest amount of protection possible.

11. Exhaustion of Non-Excavation Methods of remediation

To the extent feasible, DOE should exhaust all non-excavation methods of remediation before performing any excavation that could potentially impact cultural and historic sites.

12. Soil Prior disturbance is NOT Dispositive:

The mantra that cultural sites have been disturbed and therefore automatically are not significant is oftentimes incorrect:

- a. Disturbed sites still may contain valuable information. The newer approach is to treat disturbed sites as having the potential to provide information even if they have been disturbed;
- b. Disturbed sites still have spiritual significance;
- c. Disturbance may only be on the surface, while much excavation may continue to depths of up to 20 feet.

13. Need to Analyze Cumulative Impacts to Cultural Resources:

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54-15 To the extent possible and in accordance with the Native Americans artifact exemption in the 2010 AOC and the NHPA Section 106 Programmatic Agreement being developed by DOE with consulting parties, DOE prefers to avoid soil removal where cultural resources are known and present.

54-16 DOE is aware that disturbance does not necessarily mean that a cultural resource is no longer significant in terms of the information it provides or its spiritual significance. For example, DOE conducted extended Phase I testing on a site that was disturbed by looters in the past. This site, VEN-1775, was first recorded in 2001 (W&S Consultants 2001), when the investigators concluded that 75 percent or more of the site had been removed, seriously compromising the site's integrity. However, following DOE's extended Phase I testing, researchers determined that this site retained enough integrity to be considered eligible for listing on the NRHP.

54-17 Chapter 5, Section 5.5.11, of this Final EIS analyzes cumulative impacts to cultural resources, as required by NEPA. As discussed in Sections 5.5.11.1, 5.5.11.2, and 5.5.11.3, impacts to archaeological, architectural, and traditional cultural resources in NASA and Boeing areas of SSFL are considered to contribute to the cumulative effects of DOE's cleanup activities. The effects of actions outside of SSFL are also considered in the analysis.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

The EIS must account for other remediation projects in other areas of SSFL:

- a. Need to add NASA cultural sites;
- b. Need to add Boeing cultural sites;
- c. Other areas within SSFL.

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14. NEW MITIGATION: Cultural Interpretive Center:

- a. Can use existing building;
- b. Preferably near saved historic structure and/or test stand;
- c. Preferably away from CA-VEN-1072;
- d. Need to reserve operation and maintenance funds.

54-18

54-18 DOE appreciates your interest in future land uses at SSFL and points out that this Final EIS addresses only those areas of the site for which DOE has cleanup responsibilities, Area IV and the NBZ. DOE will continue to work with the Native Americans and the land owner, Boeing, to address potential impacts to cultural resources potentially affected by DOE cleanup of Area IV and the NBZ. Area IV and the NBZ are remote from the test stands and CA-VEN-1072. DOE does not believe any of its buildings in Area IV would be appropriate for a cultural interpretive center as suggested and cannot determine or commit to future land uses because it is not within DOE's authority to do so (as Boeing, not DOE, is the landowner).

15. NEW MITIGATION: Native American monitoring during any ground disturbing activities.

54-19

16. Need to protect CA-VEN-1072 from trespassers and vandals.

54-20

17. Deferral of Mitigation until Record of Decision (ROD):

- a. It is problematic to defer any mitigation until ROD as it prevents meaningful comment;
- b. Commenter reserves the right to ask for recirculation of the DEIS and EIS for any such deferred mitigation.

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54-19 In accordance with the Section 106 Programmatic Agreement currently under development, DOE will prepare a monitoring plan before ground-disturbing activities begin, and DOE will consult with the California SHPO, the Santa Ynez Band of Chumash Indians, and other tribes to determine where and when Native American monitoring is appropriate for building removal, groundwater cleanup, and soil cleanup.

18. Need NEPA Mitigation Plan

54-21

<http://www.whitehouse.gov/sites/default/files/microsites/ceq/20100218-nepa-mitigation-monitoring-draft-guidance.pdf>

February 18, 2010

MEMORANDUM FOR HEADS OF FEDERAL DEPARTMENTS AND AGENCIES
 FROM: NANCY H. SUTLEY, Chair, Council on Environmental Quality
 SUBJECT: DRAFT GUIDANCE FOR NEPA MITIGATION AND MONITORING
 I. INTRODUCTION

To provide for the performance of mitigation, agencies should create internal processes to ensure that mitigation actions adopted in any NEPA process are documented and that monitoring and appropriate implementation plans are created to ensure that mitigation is carried out. See *Aligning NEPA Processes with Environmental Management Systems* (CEQ 2007) at 4 (discussing the use of environmental management systems to track implementation and monitoring of mitigation). http://ceq.hss.doe.gov/nepa/nepapubs/Aligning_NEPA_Processes_with_Environmental_Management_Systems_2007.pdf (<http://www.slideshare.net/whitehouse/aligning-nepa-processes>). Agency NEPA implementing procedures should require clearly documenting the commitment to mitigate the

54-20 CA VEN-1072 is located in Area II of SSFL, which is controlled by Boeing and NASA. It is not under DOE's purview, nor would it be affected by DOE's actions and, therefore, it is not evaluated in this Final EIS. Access to Area IV and the NBZ is controlled by Boeing.

54-21 As discussed in Chapter 6 of the Final EIS, DOE will prepare a mitigation action plan for those mitigation commitments made in its Record of Decision (ROD) for the proposed remediation activities at SSFL Area IV and the NBZ. The plan would identify specific mitigation measures associated with alternatives selected in the ROD, and would describe plans for implementing the mitigation measures, monitoring their implementation and effectiveness, and reporting the results of mitigation efforts to DOE management and applicable Federal, State, local, and tribal entities and the public.

Commenter No. 54 (cont'd): Sam Cohen
Santa Ynez Band of Chumash Indians

measures necessary in the environmental documents prepared during the NEPA process (40 C.F.R. § 1508.10) and in the decision documents such as the Record of Decision. When an agency identifies mitigation in an EIS and commits to implement that mitigation to achieve an environmentally preferable outcome, or commits in an EA to mitigation to support a FONSI and proceeds without preparing an EIS, then the agency should ensure that the mitigation is adopted and implemented.

Methods to ensure implementation should include, as appropriate to the agency's underlying authority for decision-making, appropriate conditions in financial agreements, grants, permits or other approvals, and conditioning funding on implementing the mitigation. To inform performance expectations, mitigation goals should be stated clearly. These should be carefully specified in terms of measurable performance standards to the greatest extent possible. The agency should also identify the duration of the agency action and the mitigation measures in its decision document to ensure that the terms of the mitigation and how it will be implemented are clear.

If funding for implementation of mitigation is not available at the time the decision on the proposed action and mitigation measures is made, then the impact of a lack of funding and resultant environmental effects if the mitigation is not implemented warrant disclosure in the EA or EIS. In cases where, after analyzing the proposed actions with or without the mitigation, the agency determines that mitigation is necessary to support the FONSI or committed to in the ROD, and the necessary funding is not available, the agency may still be able to move forward with the proposed action once the funding does become available. The agencies should ensure that the expertise and professional judgment applied in determining the appropriate mitigation measure is reflected in the administrative record, and when and how those measures will be implemented are analyzed in the EA or EIS.

Under NEPA, a federal agency has a continuing duty to gather and evaluate new information relevant to the environmental impact of its actions. See 42 U.S.C. § 4332(2)(A). For agency decisions based on an EIS, the regulations require that, "a monitoring and enforcement program shall be adopted...where applicable for mitigation." 40 C.F.R. §1505.2(c). In addition, the regulations state that agencies may "provide for monitoring to assure that their decisions are carried out and should do so in important cases." 40 C.F.R. §1505.3. Monitoring plans and programs should be described or incorporated by reference in the agency decision documents.

21. Incorporation by reference of Memo dated March 12, 2014, "Santa Susana Cleanup," discussing NEPA alternatives analysis for selection of cleanup standards for the Santa Susana Field Laboratory Site.

Sincerely,

Sam Cohen
Government and Legal Specialist
Santa Ynez Band of Chumash Indians

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54-22

The subject memo and its accompanying email were considered in the development of the EIS. Chapter 2, Section 2.1, of this Final EIS identifies the reference as Santa Ynez Band of Chumash Indians 2014, noting that the Santa Ynez Band of Chumash Indians, a cooperating agency on this EIS, expressed their expectation that DOE would include "a robust analysis of alternatives."

**Commenter No. 55: Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District**

BELL CANYON ASSOCIATION
30 Hackamore Lane, Suite 8
Bell Canyon, CA 91307-1001

March 23, 2017

Stephie Jennings
NEPA Document Manager, SSFL Area IV – EIS
U. S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings:



We are writing to express our concerns regarding the Draft Environmental Impact Statement (Draft EIS) for Remediation of Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL). As you hopefully know, the SSFL is located less than one mile to the north of our community. Given this proximity, the Bell Canyon Homeowners Association retained an environmental consultant, Aquilogic, to review the Draft EIS. Their memorandum accompanies this letter.

In the Draft EIS, the DOE evaluated several soil and building remediation alternatives. Groundwater alternatives were considered; however, we understand that groundwater remediation will be addressed in more detail in a subsequent corrective measures study.

The Draft EIS assesses the risks to hypothetical future site residents and visitors from residual contamination that will remain at Area IV and NBZ after remediation. It does not address the risks associated with contamination present at the NASA and Boeing portions of the SSFL, or the cumulative risks associated with all contamination at the SSFL. More importantly, the Draft EIS does NOT address the potential impacts to Bell Canyon residents from the various remedial alternatives. Therefore, the analysis by DOE fails to get to the most relevant question of Bell Canyon residents: "Will the materials being cleaned-up at the site migrate to Bell Canyon during remediation and what are the resulting health risks?"

The excavation and off-site disposal of contaminated soil will result in the generation of contaminated dust, increased vehicular traffic in the area, and possibly contaminated surface water runoff. These issues were not adequately addressed in the Draft EIS. Therefore, the impact of possible wind-borne dust, increased truck traffic, and surface water runoff on the surrounding community during remedial implementation needs to be assessed before the EIS can be finalized and approved.

In addition, rigorous monitoring of wind-borne dust and surface water throughout the surrounding communities needs to be implemented during any remediation activities. Greater detail regarding such programs needs to be described in the

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55-1

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55-1 Cumulative impacts are discussed in Chapter 5 of the EIS. The residential risks for Area IV were calculated assuming the exposure was for 24 hours per day, 350 days per year, for 30 years. The 350 days per year assumes the resident is traveling away from home 2 weeks per year, and the 30 years assumes the average resident will live on the same property for 30 years. These assumptions do not leave any time for exposure to contamination on an adjacent property. Although a recreational user's time on site is not nearly as much as that for a resident, the assumed exposure time of 8 hours a day, 75 days per year, for 30 years for recreational activities (e.g., hiking) is sufficient justification for an assumption that additional recreational time at other properties would not be available. Therefore, any time spent on adjacent property subtracts from time available for exposure on Area IV.

55-2 All alternatives in this EIS would be implemented in compliance with applicable Federal, State, and local regulations and agreements, and in a manner that would be protective of the surrounding communities by incorporating the best management practices (e.g., dust control measures, and washing the undercarriage of trucks before leaving the site) during remediation activities. In response to comments on the Draft EIS, DOE has added an offsite human health impact assessment by modeling of potential releases of wind-blown dust to a variety of offsite receptors during remediation for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

55-3 DOE and its predecessor, the Atomic Energy Commission, conducted an extensive environmental monitoring and media sampling program for Area IV operations since the mid-1950s. This environmental monitoring program included samples of air, water, soil, and vegetation. The program is described and annual monitoring data are provided in DOE's annual environmental reports (accessible at http://www.etec.energy.gov/Environmental_and_Health/ASER.html). Furthermore, extensive media sampling programs of SSFL and surrounding areas have been conducted by a variety of organizations, including DTSC, EPA, and the Regional Water Quality Control Program. Information about these programs can be obtained at http://www.etec.energy.gov/Environmental_and_Health/Enviro_Monitoring.html. DOE will continue environmental monitoring and reporting to regulatory agencies and the public during building demolition and site remediation activities.

**Commenter No. 55 (cont'd): Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District**

BELL CANYON ASSOCIATION

EIS. They would then need to be reviewed by the regulators, community, and other stakeholders before the EIS can be finalized and approved.


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We demand that the DOE consider the risks of its proposed remedial actions not only to "hypothetical" future residents at the SSFL, but to "actual" current residents in the surrounding communities. We look forward to reviewing a future draft of the EIS that will hopefully address our concerns.

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Sincerely,


Board of Directors
Bell Canyon Association
Signed by its President


Board of Directors
Bell Canyon Community Services District
Signed by its President

CC: Linda Parks, Ventura County District Supervisor
Kamara Sams, Environmental Community Relations, The Boeing Company
West Hills Neighborhood Council Board of Directors
California Department of Toxic Substances Control
Congressional Representative Brad Sherman
California State Assemblyman Matt Dababneh

DOE, NASA, and Boeing submitted an air monitoring program plan to DTSC in late 2017 that includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is operating the system to establish a pre-remediation baseline. The system will continue to operate during remediation activities to monitor any potential air pollutant releases of concern. If the air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

As described in Chapter 6 of this Final EIS, DOE is committed to minimizing and mitigating both onsite and offsite impacts from building demolition and site remediation. Table 6.1 describes these minimization and mitigation measures by resource area. As described in Section 6.2, before demolition and remediation actions would begin, as required by DOE regulations (10 CFR 1021.331), DOE would prepare a mitigation action plan for any mitigation commitments made in its Record(s) of Decision (ROD[s]) for the proposed remediation activities at SSFL Area IV and the NBZ. This plan would identify specific mitigation measures associated with alternatives selected in the ROD(s) and would describe plans for implementing the mitigation measures, monitoring their implementation and effectiveness, and reporting the results of mitigation efforts to DOE management and applicable Federal, State, local, and tribal entities and the public. In response to monitoring data, DOE may revise the mitigation action plan to better achieve desired results.

**Commenter No. 55 (cont'd): Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District**



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Web: www.aquilologic.com

MEMORANDUM

Dated: March 3, 2017
To: Diane Rossiter, Bell Canyon Homeowners Association
From: Anthony Brown, aquilologic
James Clark, PhD

Subject: Review of Draft Environmental Impact Statement (Draft EIS) – January 2017
Remediation of Area IV and the Northern Buffer Zone of the
Santa Susana Field Laboratory (SSFL), Ventura County, California

Project No.: 036-01

Aquilologic, Inc. (aquilologic) has been retained by the Bell Canyon Homeowners Association (Bell Canyon) to review the Draft Environmental Impact Statement (Draft EIS) for Remediation of Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL), in Ventura County, California (the Site). Figure 1-2 in the Draft EIS (attached hereto) shows the location of Area IV and the NBZ at the SSFL. The scope of our assignment was as follows:

- Review the Draft EIS
- Summarize the potential remedies
- Summarize the risk assessment
- Identify data gaps or deficiencies

Introduction

The U.S. Department of Energy (DOE) (2017) prepared a *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory* in accordance with the National Environmental Policy Act (NEPA) and Council on Environmental Quality (CEQ) and DOE implementing regulations at Title 40, Code of Federal Regulations, Parts 1500-1508 (40 CFR Parts 1500-1508) and 10 CFR Part 1021, respectively.

Past activities at the SSFL resulted in chemical and radiological releases that impacted soil, buildings, and groundwater. Residual chemicals and radionuclides from historical operations are present in soil, buildings, and groundwater in Area IV of the Energy Technology Engineering Center (ETEC), as well as in soil in the NBZ. Extensive soil sampling and analysis in recent years has demonstrated that the chemical contamination is more widespread than the radiological contamination, and that contaminants are concentrated near certain facilities, rather than being evenly distributed across the Site. In 2013, the California Department of Toxic Substances Control (DTSC) published remediation Look-Up Table (LUT) values for 116 chemicals at SSFL and

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provisional LUT values for 16 radionuclides. Remediation is needed to clean up these residual chemicals and radionuclides, in compliance with Federal and State regulations, orders, and agreements.

The Draft EIS analyzes the potential environmental impacts of alternatives for conducting cleanup activities in Area IV and the NBZ. Separate remedial alternatives for soil remediation, building demolition, and groundwater remediation are described.

Remedial Alternatives Summary

Soil Remediation

For soil remediation, DOE's proposed action is to implement the technical requirements of the 2010 Administrative Order on Consent for Remedial Action (2010 AOC); that is, clean up contaminated soil to levels specified by DTSC in the LUT values (Cleanup to AOC LUT Values Alternative). In preparing the EIS, DOE identified challenges to implementing this alternative, including difficulties determining when the AOC LUT values have been met and difficulty finding replacement soil that meets the AOC LUT values.

Consistent with NEPA requirements, this EIS also analyzes a no action alternative (no soil treatment or removal), as well as two additional action alternatives (Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative). DOE believes that the additional action alternatives would be protective of the environment and the health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values.

The areas of soil contamination where remedial actions are proposed are shown on Figures 2-2, 2-4, and 2-5 in the Draft EIS (attached hereto).

For all of the alternatives, DOE will begin soil remediation once building demolition and decontamination has been completed. The details of each soil remediation alternative are summarized in Table 1. As shown in Table 1, the cancer risks and toxic hazards (as indicated by the hazard index) decrease across the alternatives from the highest risk level (No Action Alternative) to lowest risk level (under the Cleanup to AOC LUT Values Alternative).

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Table 1: Summary of Soil Remediation Alternatives

Alternative	Description	Duration	Cancer Risk	Hazard Index
No Action	No soil would be (1) treated to reduce contaminant concentrations to levels that would meet cleanup criteria or (2) removed for off-site disposal.	NS	1 chance in 3,000 to 16,000	0.8 to 30
Conservation of Natural Resources	DOE would divide Area IV and the NBZ into risk assessment units and evaluate those units against risk and dose criteria. An assessment of each area would be required to determine the relative quantities of chemicals and/or radionuclides that would trigger a cleanup decision. Approximately 145,000 cubic yards of soil would be removed and disposed of off-site. Approximately 11,100 truck round trips to remove the soil and 7,200 truck round trips for transporting backfill to the Site would be required.	Over 2 years	1 chance in 25,000 to 91,000	0.6 to 1
Cleanup to Revised LUT Values	The revised chemical LUT values would be based on risk-based screening levels (RBSLs). Cleanup decisions would be made on a point-by-point basis; that is, if the soil in a particular area exceeded the revised LUT value for any chemical or radioactive constituent, the soil would be removed. Approximately 192,000 cubic yards of soil would be removed and disposed of off-site. Approximately 14,400 truck round trips to remove the soil and 9,000 truck round trips for transporting backfill to the Site would be required.	Over 2 years	1 chance in 100,000 to 270,000	0.04 to 0.5
Cleanup to AOC LUT Values	Approximately 933,000 cubic yards of soil would be removed and disposed of off-site. Approximately 70,000 truck round trips to remove the soil and 46,000 truck round trips for transporting backfill to the Site. Soil with low concentrations of total petroleum hydrocarbons (TPH) and poly-nuclear aromatic hydrocarbons (PAHs) (~150,000 cubic yards) would remain in-place to be addressed by monitored natural attenuation (MNA).	Over 10 years	1 chance in 100,000 to 310,000	0.02 to 0.4

NS: not specified

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On-site treatment and/or on-site disposal of contaminated soil was considered; however, the conditions in the current regulatory orders prohibit on-site disposal and various on-site treatment alternatives were not considered viable.

Building Demolition

For buildings, DOE's proposed action is to demolish the 18 structures it owns in Area IV and dispose of or recycle the materials off-site (Building Removal Alternative); the EIS also analyzes a no action alternative of leaving the structures in place, in accordance with NEPA requirements. The details of each building demolition alternative are summarized in Table 2.

The locations of buildings that may be demolished are shown on Figure 2-6 of the Draft EIS (attached hereto).

Table 2: Summary of Building Demolition Alternatives

Alternative	Description	Duration
No Action	Eighteen DOE-owned structures in Area IV would remain in place. DOE would conduct surveillance and maintenance, as needed for safety (e.g., preventing access). Because radiological materials would remain in some buildings, DOE would continue its responsibilities in accordance with the Atomic Energy Act and ensure continuation of security that restricts access to Area IV and the structures.	NS
Building Demolition	Demolish the 18 structures in Area IV and dispose of or recycle the materials off-site. Building removal activities are estimated to disturb about 8.4 acres. Approximately 1,500 truck round trips over a 2 year period would be required.	Over 2 years

Groundwater Remediation

No active groundwater remediation alternative is proposed in the Draft EIS. The following groundwater remediation alternatives are presented in the Draft EIS:

1. No action
2. Groundwater MNA

The location of groundwater contaminant plumes where remedial actions are being proposed are shown on Figure 3-18 in the Draft EIS.

The details of each groundwater remediation alternative are summarized in Table 3.

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55-4

The statement “No active groundwater remediation alternative is proposed in the Draft EIS” is incorrect. The Draft EIS addresses active remediation actions, including pump and treat, soil vapor extraction, and source removal, see Section 2.6.3 of this Final EIS. This Final EIS includes revised groundwater sections that reflect the completion of the *Draft Resource Conservation and Recovery Act (RCRA) Facility Investigation Groundwater Investigation Report for Area IV, Ventura County, California* (CDM Smith 2018a) and *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b). Treatability studies conducted by Boeing in Area IV (CH2M Hill 2016) resulted in the elimination of one groundwater treatment technology, Enhanced Groundwater Treatment, from consideration in the Final EIS. The study identified difficulties that would limit the effectiveness of the technology.

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Table 3: Summary of Groundwater Remediation Alternatives

Alternative	Description	Duration
No Action	Current groundwater monitoring would continue (40 wells annually). DOE would not implement additional monitoring. As part of the SSFL-wide groundwater interim measures, the currently planned Former Sodium Disposal Facility (FSDF) Groundwater Interim Measure would be initiated to extract trichloroethene (TCE) contaminated groundwater.	NS
Monitored Natural Attenuation	No active remediation of any DOE groundwater plumes would occur. In addition to the wells that would continue to be monitored under the No Action Alternative, DOE would install and monitor additional wells. The contaminant plumes would be sampled (i.e., monitored) on an established schedule to confirm that reduction of the contaminant concentrations continues as anticipated.	The time frames for monitoring would be adjusted based on sampling results. Radionuclides or chemicals: 10 to 50 years Strontium-90: More than 100 years

The assessment of groundwater remediation alternatives was limited and appears premature. As stated in the Draft EIS, a Resource Conservation and Recovery Act (RCRA) Corrective Measures Study (CMS) is currently being developed independently from this EIS. An evaluation of active groundwater treatment alternatives is pending based on the RCRA CMS (anticipated sometime in 2017). It is anticipated that the groundwater treatment alternative would include one or a combination of the following methods: pump and treat, followed by local re-injection of treated water; enhanced groundwater treatment, consisting of *in-situ* treatment such as chemical injection or biological enhancement; or soil vapor extraction.

Discussion

The Draft EIS focuses on the impacts to hypothetical residents and recreational users of the SSFL following remediation of the impacted areas. The Draft EIS does not address any human-health impacts to the surrounding community, notably the residents of Bell Canyon. In addition, the analyses presented in the document, notably the risk assessment, lack the necessary quantitative back-ups for a complete peer review evaluation.

Remediation of contaminated media (i.e. buildings, soil, groundwater) will reduce the potential exposure of future receptors. However, soil remediation alternatives 2, 3, and 4 involve the excavation and off-site disposal of contaminated soil (between 145,000 and 933,000 cubic yards). This may result in the inadvertent spreading of impacted materials outside the boundaries of the current areas of contamination. Dust generated at the Site during remedial activities has the potential to leave the confines of the SSFL, resulting in possible exposure of receptors (including residents of Bell Canyon) for decades. Of note, radio-isotopes identified as being present at SSFL are very energetic and have half-lives that are hundreds of years long.

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The analyses in this EIS are all reviewed in accordance with rigorous procedures developed to ensure the quality, reproducibility, and adequacy of the analyses. These procedures require that personnel qualified and knowledgeable in the specific subject areas thoroughly review and confirm the technical analyses. The analyses (the commenter's quantitative backup) and reviews are documented and maintained in the administrative record for the EIS.

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The analysis of potential air quality impacts (and ultimately the potential health impacts to receptors) is in general accordance with most analyses of project impacts. Mitigation measures are proposed to minimize dust generation in compliance with air quality permit requirements. However, the simple assumption that adequate control of emissions will always be maintained to prevent small, respirable dust particles impacted with chemical or radioactivity contamination from ever leaving the Site is not health protective or reliable. Some wind-borne dust will likely occur, and the analysis by the DOE fails to get to the most relevant question to Bell Canyon residents. Will the materials being remediated at the Site migrate to Bell Canyon? The analysis by the DOE lacks the specificity to answer this critical question. The lack of any air-dispersion modeling to show that particulate matter generated at the Site cannot reach beyond the boundaries of the SSFL is particularly problematic. Thus, the impact of possible wind-borne dust on the surrounding communities requires further evaluation by the DOE. In addition, rigorous monitoring of wind direction, air-borne particulates, and contaminant presence in wind-borne dust throughout the surrounding community needs to be implemented during any remediation activities.

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The excavation would also lead to large volumes of truck traffic from the SSFL to an off-site disposal facility (between 18,300 and 116,000 truck trips over 2 to 10 years, or approximately 35 to 45 truck trips per day, assuming a 5-day work week). Most of the truck traffic would be directed along Woolsey Canyon Road and thence either east or south on Valley Circle Boulevard (Figure 3-28 in the Draft EIS – attached hereto). Truck traffic would not pass directly through Bell Canyon, and various truck routings were evaluated to minimize traffic congestion and risks to residential neighborhoods. In addition, the remedial alternatives would only result in approximately 35 to 45 truck trips per day. Some increased traffic congestion may occur in the area at certain times of the day, especially on Valley Circle Boulevard. Given the volume of truck traffic anticipated, this should not be significant. However, the risks to the surrounding community from this increased truck traffic (e.g. increased vehicle emissions, increased risk of traffic accidents, increased damage to road surfaces, risks to property) require further evaluation.

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As with the soil remediation alternatives, building demolition would result in the generation of wind-borne dust and increased truck traffic in the area. This only compounds the concerns expressed above regarding soil remediation.

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In addition to wind-borne contamination, there is the potential that contaminants could migrate from the Site via surface water run-off. Such instances have reportedly occurred in the past. During excavation activities, large volumes of contaminated soil will be exposed to the elements, including large storm events. Run-off protection measures will be implemented during remedial activities to minimize both local and off-site flow of surface water. However, the impact of possible contaminated surface water discharging to the surrounding communities requires further evaluation by the DOE. In addition, rigorous monitoring of surface water flows

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Assuming implementation of the Cleanup to AOC LUT Values Alternative, there could be an average of 16 heavy-duty truck round trips per day. (Empty waste trucks would enter the site and leave loaded, while loaded trucks with backfill would enter the site and leave unloaded.) Considering additional cleanup activities by DOE, Boeing, and NASA, there could be up to 96 daily heavy-duty truck round trips per day during some years. DOE acknowledges that this traffic could result in increased emissions of pollutants in the SSFL neighborhood, increased risk of traffic accidents which could be harmful to people or property, and increased potential for damage to road pavement due to passage of heavy trucks. These emissions and traffic risks would increase given an increase in the number of trucks in the SSFL vicinity that are required for SSFL remediation. In this Final EIS, DOE explicitly evaluates the potential for increased air emissions in Ventura County and the area directly adjacent to SSFL in Chapter 4, Section 4.6. Potential risks from transport of waste and materials are addressed in Chapter 4, Section 4.8.1, while the potential for damage to road pavement due to the passage of heavy-duty trucks and other traffic is addressed in Chapter 4, Section 4.8.2. The possible impacts of increased traffic on government services and local revenue are evaluated in Section 4.12. DOE discusses environmental justice issues in Section 4.13 and potential effects on age-sensitive individuals in Chapter 4, Section 4.14.

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and Richard Levy, Bell Canyon Community Services District**



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and contaminant concentrations throughout the surrounding community needs to be implemented during any remediation activities.

The health risk analysis focuses on theoretical residents and visitors at the SSFL property. The health risk analysis indicates that each of the remedial actions will result in a decreased lifetime cancer risk. Estimates of current cancer risks and toxic hazards have a maximum of 1 in 3,000 and 30, respectively. These values far exceed the generally accepted thresholds of 1 in 1,000,000 and 1, respectively. Following the most conservative remedial measures (i.e. cleanup to AOC LUT values), the lifetime cancer risk values decrease to 1 in 310,000. This is significantly less than the current values, but still above the optimal value of 1 in 1,000,000.

Data Gaps

Soil

In June 2009, the United States Environmental Protection Agency (EPA) initiated a radiological study of Area IV and the NBZ with funding provided by the DOE. The EPA determined that four locations required further evaluation for naturally occurring radionuclides in soil. It was recommended that the DOE conduct a review of decay series and radionuclide ratios to support a determination of the origin of the radionuclides.

Backfill Soil

DOE conducted an initial evaluation of three off-site locations for soil to be used as backfill at the SSFL and found that none meet the requirements of the 2010 AOC (i.e. that the backfill meets the AOC LUT values). Because the AOC LUT values are very low, the DOE has had difficulties identifying a source of backfill soil, especially soil that is comparable to the existing local soil (i.e., that would support the native plant communities). Additional potential sources of backfill soil that meets the requirements of the 2010 AOC LUT values need to be identified and evaluated.

Groundwater

As stated in the Draft EIS, there are six primary areas within Area IV that require remediation measures to protect the groundwater:

1. F5DF TCE plume
2. Hazardous Materials Storage Area (HMSA) TCE plume
3. Building 4100/4056 landfill TCE plume
4. Building 4057 Warehouse perchloroethylene (PCE) plume
5. Tritium plume (in the area of the former Building 4010)
6. RMHF leach field strontium-90 source

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55-7 It is not clear where the commenter is obtaining the risk and toxicity values. The risk above natural background radiation level estimates in the Draft EIS for residents under the No Action scenario is 1 chance in 500,000 for radionuclides and is negative for chemicals in soil. (The site's radiation levels are indistinguishable from background levels.) The net hazard index is only 0.1. It appears that the commenter may be referring to risk from background levels or perhaps even site values without background subtraction. However, even the background and site toxicity levels are only 3.5 and 3.6 respectively, not 30. No quantitative risk values were presented in the Draft EIS for the Cleanup to AOC LUT Values Alternative or any other action scenario. As discussed in Chapter 4, Section 4.9 of the Draft EIS, The risk values are compared to an EPA defined acceptable risk range of 1 in 1,000,000 to 1 in 10,000. In response to comments, DOE has added a quantitative evaluation of human health impacts to potential onsite post-remediation receptors for all alternatives. The results of the modeling are included in Section 4.9 of this Final EIS.

55-8 DOE has performed the review of naturally occurring radionuclides in soil. A Technical Memorandum *Evaluation of Naturally Occurring Uranium and Thorium Decay Chain Radionuclides in Santa Susana Field Laboratory Area IV Soils* (Rucker 2015) was issued in August 2015 and will be used in developing the Site Remedial Action Implementation Plan. This reference has been cited and referenced in Chapter 3, Affected Environment, in this Final EIS.

55-9 DOE acknowledges that an acceptable source of backfill that meets the LUT values has not been identified and notes the importance of a backfill soil that would support native plant communities. DOE initiated the search for locating backfill soil meeting the AOC requirements by sampling at three sites (two commercial sites and a source of dredged lake sediment), evaluating existing data from a third potential site, and sampling of soil products that could serve as soil amendments. All samples did not meet the AOC LUT requirements. Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source.

55-10 DOE has completed the additional groundwater investigations identified in this comment and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS was updated with information from the final groundwater remedial investigation report, including information on the magnitude and extent of the existing groundwater contamination plumes in Area IV and the NBZ. The report is included as a reference for this Final EIS and is available for review on DOE's SSFL EIS website, http://www.ssflareaiveis.com/ssfl_areaiv_eis.aspx.

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Based on our review of the Draft EIS, it appears that the magnitude and distribution of the following three contaminant plumes has not been fully characterized in the following directions:

1. FSDP TCE plume: east and northeast direction
2. Building 4100/4056 landfill TCE plume: west direction
3. Building 4057 Warehouse PCE plume: east direction

In addition to the six primary areas identified above, two other areas with lower concentrations of groundwater contamination, mainly solvents, also need to be evaluated: RMHF TCE plume, and Metals Clarifier TCE plume.

The DOE will need to conduct additional Site investigations to further address the data gaps and more adequately characterize groundwater plume conditions. It is stated in the Draft EIS that "additional information about investigation of impacted groundwater can be found in the Area IV Groundwater Remedial Investigation Work Plan" (RIWP).

Furthermore, a comprehensive feasibility study on active groundwater treatment alternatives is needed after the Site is fully characterized. As stated in the Draft EIS, a RCRA CMS is currently being developed independently from this Draft EIS. The study, which is anticipated sometime in 2017, will evaluate and select groundwater treatment technologies (e.g., pumping and treatment, soil vapor extraction, MNA) to be applied as remedial actions.

The results of the investigation proposed in the RIWP and the findings of the RCRA CMS will need to be reviewed to evaluate the effectiveness of the selected groundwater remedy.

Closing

The Draft EIS, as presented, focuses on the health impacts to hypothetical future residents at, and visitors to, the SSFL property. The Draft EIS does not address the potential impacts to Bell Canyon residents from the various remedial alternatives. Given the volume of material to be excavated, the potential risks to the surrounding communities associated with wind-borne contaminants, surface water runoff, and increased vehicular traffic, further evaluation by the DOE is needed.

References

U.S. Department of Energy (DOE). 2017. Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL), Ventura County, California. January.

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The Draft Area IV RCRA Corrective Measures Study (CDM Smith 2018b) was completed after the issuance of the Draft EIS. This Final EIS contains revised text incorporating the findings of the remedy evaluations (see Chapter 2, Section 2.6.3, of this EIS).

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**Commenter No. 55 (cont'd): Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District**

groundwater in the 290 acres of Area IV and the NBZ. DOE shares responsibility with NASA for cleanup of soil in the 182-acre NBZ; NASA is responsible for cleanup of contamination in the NBZ that emanates from areas that it administers (DTSC 2010b). DOE shares responsibility with Boeing for groundwater remediation in Area IV and the NBZ, as defined in the 2007 *Consent Order for Corrective Action* (2007 CO) (DTSC 2007). Not all of the energy research conducted in Area IV was performed for DOE. Some energy research was performed by Boeing and its predecessors. Boeing is responsible for decontamination and demolition of the buildings it owns in Area IV.

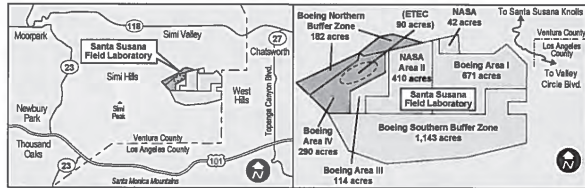


Figure 1-2 Santa Susana Field Laboratory and Surrounding Communities

Starting in the mid-1950s, AEC funded nuclear energy research on a 90-acre parcel of land in what is now SSFL Area IV, which was leased from Rocketdyne. ETEC was established by AEC on this parcel in the early 1960s as a “center of excellence” for liquid metals research (primarily sodium, potassium, and mercury) and general metals compatibility testing. DOE (or its predecessor agencies) also operated a total of 10 small nuclear reactors built for various research activities over the years of operation. As part of the operations of a research and development site, structures were constantly used, cleaned, and refurbished for a new purpose or demolished. As a result, cleanup activities have been ongoing since the 1960s. By 1980, all reactor operations had ceased, and nuclear research at ETEC was terminated in 1988. By the time non-nuclear liquid metals research ended in 1998, many facilities had been decontaminated, decommissioned, and demolished, and associated contaminated materials had been removed. As appropriate, these activities were covered by categorical exclusions in accordance with DOE’s “NEPA Implementing Regulations” (10 CFR Part 1021, Appendix B to Subpart D).

Operating research reactors and conducting nuclear research resulted in some localized releases of chemicals and radionuclides to the soil, bedrock, and groundwater. The concrete containments that surrounded the reactors became radioactive. Leaks from some liquid radioactive waste holdup tanks contaminated surrounding soil. Releases of wastes into leach fields contaminated soil, bedrock, and groundwater. DOE (or its predecessor agencies) decontaminated and demolished several of its structures and facilities in Area IV to the standards established at the time decommissioning occurred (see, for example, the discussion of prior cleanup in Chapter 2, Section 2.3.3.1, under 2010 AOC Soil Cleanup Standards), in accordance with its authority under the Atomic Energy Act of 1954, as amended. The major periods of building demolition were 1975 through 1977 and 1995 through 2005. DOE has removed all nuclear materials from the site, as well as all but two of its reactor buildings, and has performed cleanup of radioactive buildings, soil, and bedrock to the standards established in the 1980s and 1990s.

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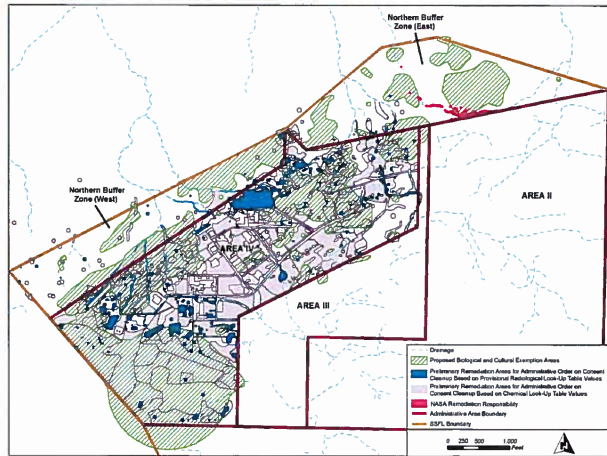


Figure 2-2 Extent of Radiological and Chemical Constituents Above AOC Look-Up Table Values with Proposed Exemption Areas

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Commenter No. 55 (cont'd): Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District

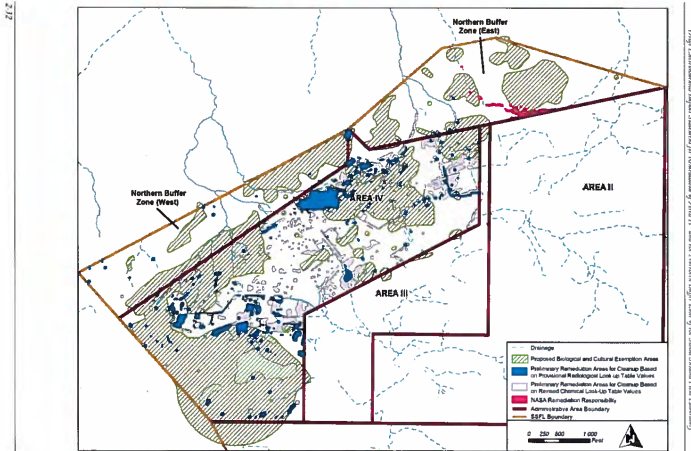


Figure 2-4 Soil Remediation Cleanup to Revised LUT Values Alternative

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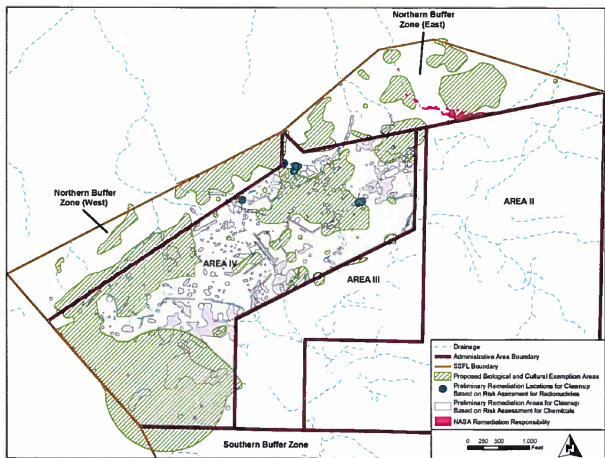


Figure 2-5 Soil Remediation Conservation of Natural Resources Alternative

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**Commenter No. 55 (cont'd): Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District**

Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

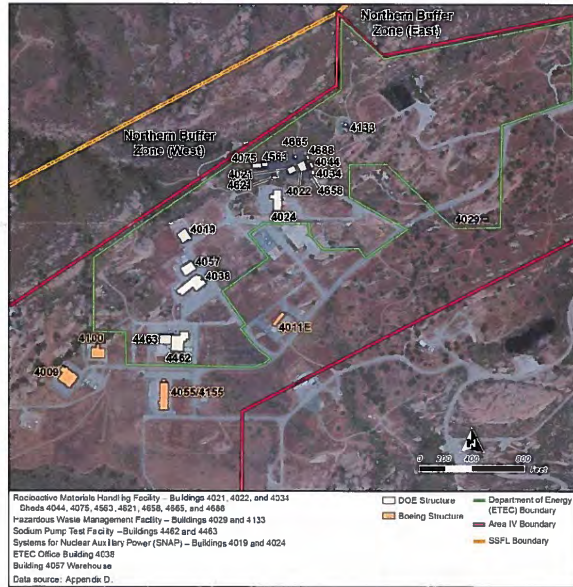


Figure 2-6 Remaining Structures in Area IV

At least two staging areas would be established to support building demolition and soil remediation work. The first would be the main staging area within the north-central portion of Area IV, near Building 4024. This staging area may be supplemented by an additional area south of Building 4038 (see Figure 2-6) that would include a contractor trailer, worker parking, portable restrooms, heavy equipment parking, and a decontamination pad. The main staging area would be situated on level ground where buildings previously stood to take advantage of existing cement foundations. A second staging area would be set up in the eastern portion of Area IV. This staging area, which would be located on level ground where buildings previously stood west of Building 4133, would be used to support soil remediation work in this area. Facilities would be similar to those described for the main staging area. Neither grading nor major vegetation clearance would be required to prepare the staging areas. Other, more-temporary staging and stockpiling areas would be set up within 300 feet of facilities undergoing demolition. These areas would be located on asphalt, concrete, or

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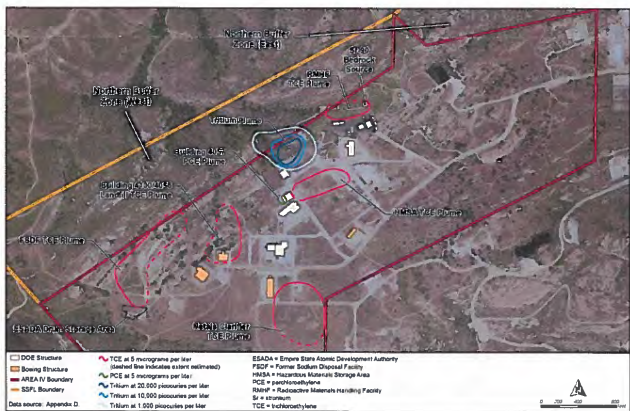


Figure 3-18 Groundwater Plumes

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**Commenter No. 55 (cont'd): Eric Wolf, Bell Canyon Association
and Richard Levy, Bell Canyon Community Services District**

Draft Environmental Impact Statement for Remediation of Area 117 and the Northern Buffer Zone of the Santa Susana Field Laboratory

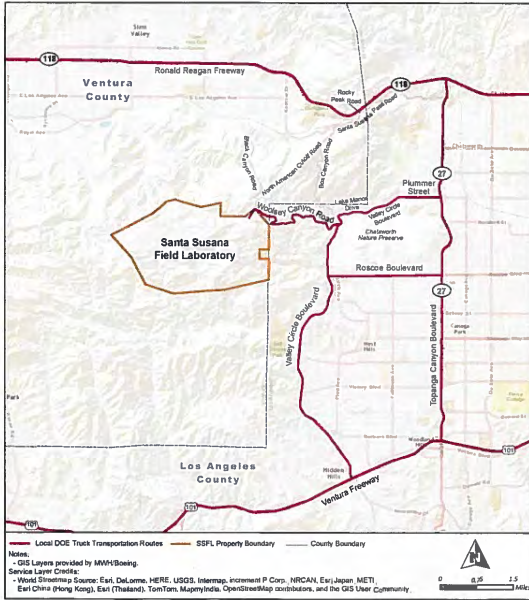


Figure 3-28 Local Transportation Routes for Waste Transportation Vehicles

Black Canyon Road. This roadway originates from the Santa Susana Knolls area located north of SSFL and on the southeastern side of Simi Valley. Black Canyon Road is not used for truck traffic as this road is not suitable due to narrow lanes, extensive sharp curves, and little to no shoulders along the roadway. The roadway provides access for SSFL employees and smaller commercial trucks. From Oak Knolls Road in Santa Susana Knolls, Black Canyon Road ascends approximately 1,000 vertical feet to the Simi Crest, to an intersection with North American Cutoff Road approximately 0.25 mile north of the SSFL main gate.

North American Cutoff Road. This road extends from Box Canyon Road (about 0.75 mile north of the intersection of Box Canyon Road and Santa Susana Pass Road) to Black Canyon Road about 0.4 miles north of the SSFL Main Gate. The roadway surface is a mix of earth, aggregate, and some

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Commenter No. 56: Lee Jay Mandell

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March 24, 2017

Stephie Jennings
NEPA Documents Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings:

Please consider the attached document that I prepared when you prepare the Final EIS for the "Draft Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (DOE/EIS-0402).

Sincerely,

Lee Jay Mandell

Lee Jay Mandell

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Commenter No. 56 (cont'd): Lee Jay Mandell

The SSFL (Santa Susana Field Laboratory)

**A simplified non-mathematical analysis of the inverse square law,
alleged existing health risks, and the true health and economic risks of the
proposed cleanup unless it is minimized to no more than a residential standard**

By Lee Jay Mandell, B.S.E.E., M.S.E.E., J.D.

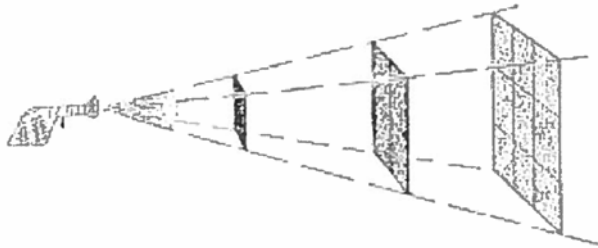
So, who am I and why do I care? I live in West Hills. I am a retired microcomputer engineer and patent attorney. I respect science and understand the guilt feelings associated with errors since even the best engineers and scientists do make mistakes. I also understand as a retired attorney that litigation is not desirable and thus an out of court settlement is generally pursued and encouraged by judges to avoid an erroneous decision (which according to at least one side of each dispute occurs 100% of the time). I am not a member of any group associated with this matter although I have met participants on each side and have been to a few educational meetings. All thoughts expressed are solely my own although I have sought assistance to discuss this matter since the unique vocabulary is outside my otherwise extensive background which extends from oil pipelines, oil drilling rigs, refineries, computerized/energy efficient homes, the design and manufacture of networked (S.E.C.S.) semiconductor manufacturing equipment in a near zero particulate atmosphere using a highly toxic chemical etch on a silicon wafer interleaved with a cleaning step using highly purified DI (de-ionized) water, the architecture of all current microprocessors (part of a patent infringement case which extended to the US Supreme Court), implantable medical devices, e.g., improved pacemakers and treatments to avoid DVTs. In my background as a microcomputer consultant and a patent attorney, it was always my job to quickly acquire/learn a lifetime's worth of knowledge in new technological fields before I started work on each new task and to never accept as gospel the prior work of others but to build upon the existing available knowledge.

I thought that it would be useful to first present a simplified technique for understanding the effects of nuclear radiation to the environment and the people living in that environment and thus I will begin with a short simplified non-mathematical description, commonly described as the butter gun effect. Imagine that you have a spray gun that sprays butter, note not a stream, a wide spray. Imagine that you are in front of the gun,

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you get covered with butter, right? Ok, now move 2 feet back, you get less butter on you. Now, back off 4 feet, you get even less butter on you (1/4, that is the math). Go back 8 feet even less, go back 1000 feet, essentially no butter at all, skip the math.



Now none of us want butter squirted in our face but at some point, there is butter everywhere and the butter from this butter gun is statistically insignificant. The universe is built that way, whether from science or a deity, your choice. Radiation, whether nuclear or electromagnetic, e.g., cell phone RF, abide by these laws, that is why there are so many cell phone towers because they lose their effect in a relatively short distance, that is the basis of cell phones. Thus, radiation goes by the same rules. Radiation is everywhere, some places worse than others, some is just part of living in this universe. Living near the SSFL could arguably be problematic, living a couple of miles away, considerably less so, not so much butter. The medical studies (discussed below) say that there is no significant statistical increase in cancer or butter at the site (actually, some measured decreases), it was not even worthy of consideration, butter on children was too obscure to be studied, although a further study would be warranted (but has never been done and so we are only presented unsupported cases without medical histories, e.g., no geographical history of fertilization, gestation, home addresses, related to the SSFL or were at least a portion of these parents drawn toward a hospital that dealt with rare diseases or cancers, which is a typical and rational act by a desperate parent. Nobody wants radiation or butter on them and everybody knows someone who has cancer and thus there must be a reason but

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DOE acknowledges your comment and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of data on offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS that provides comparative information about cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

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scientifically the SSFL clearly is not it. That is the simplified explanation since even "rare" cancers are found everywhere.

The most relevant medical study was done in 2007 by Hal Morgenstern et al. entitled "Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California" (the Morgenstern study) which showed limited concerns for limited cancers but ONLY very close to the site (see its Table 11 below). As noted in this study, >5 miles away there is no effect from the SSFL. However, it shows that at the site, i.e., <2 miles, the incidence of Melanoma, Breast, and Prostate cancers are actually decreased from the normal incidence rate. These numbers are hard to justify but unless (iff, if and only if) you believe these numbers then noting any other increases in the range of <5 miles become questionable. Perhaps, these reduced cancers rates at the site justify those who successfully petitioned the federal government to make the SSFL a national monument but it certainly shows the current risk is de minimis.

Table 11. Standardized rate ratio* (SRR; 95% CI), by distance from SSFL and cancer site: Site-specific cancers, 1988-1995; Los Angeles and Ventura Counties, CA.

Cancer Site	<2 miles	2-5 miles	>5 miles (referent)
Melanoma	0.57 (0.23, 1.36)	1.17 (0.94, 1.46)	1
Colorectal	1.32 (0.86, 2.02)	1.00 (0.87, 1.13)	1
Lymphopoietic [†]	1.62 (0.94, 2.83)	0.93 (0.78, 1.10)	1
Lung	1.29 (0.89, 1.89)	1.12 (1.00, 1.26)	1
Breast	0.92 (0.65, 1.31)	1.00 (0.90, 1.11)	1
Bladder	1.62 (0.67, 4.12)	0.97 (0.74, 1.27)	1
Prostate	0.90 (0.60, 1.35)	0.94 (0.84, 1.06)	1
Thyroid	2.59 (0.49, 18.61)	1.36 (0.89, 1.78)	1
Upper Aerodigestive Tract [‡]	1.83 (0.91, 3.82)	1.14 (0.93, 1.41)	1

* Standardized for age (15-39, 40-59, 60+ years), gender, and race/ethnicity (non-Hispanic white, Hispanic, and other non-Hispanic).
[†] Cancers of lymphatic and hematopoietic tissue (excluding chronic lymphocytic leukemia).
[‡] Includes cancers of the oral and nasal cavities, pharynx, larynx, and esophagus.

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DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. Section 2.8 cites the 2007 Morgenstern study by the University of Michigan, School of Public Health (UM 2007). That study identifies some of the limitations identified in this EIS. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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Now let us presume that there are cancers here as there are everywhere. There have been no controlled studies disclosed that would show causation between any of the new cancers of children that would identify the SSFL as being related. Apart from the small print which we all saw and ignored in real estate documents which disclosed the 50-year-old event, neither that nor the city stopped anyone from moving in and living in this area. I have not seen any studies which would correlate the childhood cancers to the SSFL, only the suspicions of a few over 50 years. Were the mother's eggs fertilized at the SSFL, was the gestation of each fetus limited to the limited area surrounding the SSFL, did the children grow up their whole lives proximate to the SSFL, did the parents reside large portions of their lives at the SSFL or did parents move here from other states, perhaps to be near Children's Hospital, was there any genetic predisposition of either parent? I just don't know and that needs exploration before there can be any conclusions or rational responses.

Medical science (more specifically its practice because generally medicine is something you practice based on your work and experience, epidemiologic studies, and the work of others) cannot conclude a causation at this point of time and I would question any doctor who claimed that they could. Certainly, further studies should be done before the massive economic and traffic destruction of the West San Fernando Valley proceeded. Why now after 50 years, the current evidence is even less conclusive as are there risks, if any. I do not question the responses of anyone 50 years ago, when the apparent and real risks seemed imminent.

Now, I do understand the query as to why is this happening to me. After the Northridge Earthquake, I was erroneously diagnosed with Valley Fever, why me? Actually, in my case it was a misdiagnosis based on the limited experience of the doctors involved. Doctors practice medicine based on their exposure to patients, they never perfect their profession as a science. Later, a cancer doctor diagnosed my condition as presumptively cancer and ordered invasive biopsies, why me? Eventually, a more experienced specialist diagnosed it (via a considerably less invasive biopsy) as a condition so rare that Dr. House, the fictional TV doctor, used it in almost every episode to show his brilliance that he knew an extremely obscure diagnosis. The worldwide specialist resided at USC and so

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of course, I went to USC. It was a condition typically correlated to race and nationality, none of which applied, and so back to why me? Sometimes there isn't an answer, sometimes it is genetic, sometimes it is misfortune, sometimes science is not ready to answer the question but spreading misfortune into an economic disruption, i.e., significant drops in housing prices and further restrictions to the already abhorrent highway traffic patterns on freeways and narrow two lane surface streets, will not and can not solve the problem. Sometimes, that means we go to doctors who present the best case that they know an answer to even when there may not be any.

The reason that an overly aggressive cleanup of the SSFL is hazardous is that mistakes happen, like what happened 50 years ago. Trucks do crash, the more trucks, the more likely that a crash will occur (simple, obvious statistics) no matter how well intentioned everyone is. Let's look at the 9/4/13 email from David Collins et al. to the DOE entitled "Rough Order of Magnitude Estimates for AOC Soil Cleanup Volumes in Area IV, and Associated Truck Transport Estimated based on DTSC Look-up Table Values -- DRAFT". In that email they discuss 3 levels of cleanup using "10- to 15-cubic yard capacity roll-off bins, and some will be hauled off in 16- to 18-cubic yard end-dump trucks". The estimates are based on a limit of "35 truckloads per day, 5 days a week, and 50 weeks a year". Depending on the soil cleanup scenario (shown below in its Table 4), the number of truckloads are alternatively 18,900 for 2.2 years, 67,463 for 7.7 years or 104,213 truckloads for 11.9 years.

Now let's hypothesize the worst scenario, the 104,213 truckloads spread over 11.9 years. Presumably, there is a massive demolition/excavation spread over those years (or even the smallest time period). It is unavoidable to not expose the environment to massive levels of particulate over that period of time since how could they seal the excavation cavities each hour, each day as the process continued and thus the risks to the community, which are arguably stable or currently non-existent would now be become massive.

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56-3 DOE acknowledges that the potential for an accident increases as the volume of traffic increases. The cited truck shipments are estimates based on the evaluated truck-loading configurations and the expected levels of cleanup. DOE agrees that there are some risks associated with the transport of the contaminated soils. However, the risks, as documented in Appendix H, Section H.8, and Chapter 4, Section 4.8.1, of this EIS, are very small. It should be noted that the radioactive contamination level in the soil to be transported is itself very low. Some soil to be shipped likely would have radioactive contamination levels below detection limits. Nevertheless, at least some contamination would exist in the transported soil. It should also be noted that the radioactive contaminants are bonded within the soil matrix and, in the event of an accident, soil would not easily become airborne and be carried over a long distance. If an accident were to occur, the expected releases would be local and manageable Also see the response to comment 162-6.

While the SSFL site has not been designated as a National Monument, DOE is aware of the petition to designate portions of the SSFL site as such. However, these portions of the site are not within Area IV or the NBZ. These efforts are directed at preserving the structures associated with advancement of the space program and cultural resources identified on the NASA portion of the site (NASA has deferred demolition of test stands pending the outcome of the effort to designate the site.)

56-4 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 56 (cont'd): Lee Jay Mandell

Table 4
Summary of Investigation for Area IV Soil Volumes - Draft
Santa Susana Field Laboratory
Data Prepared - September 5, 2013

Soil Cleanup Scenario ¹	On-Site Soil Volume ²			Total
	Chemical (cubic yds)	Geological (cubic yds)	Anthropogenic (cubic yds)	
2) Chemical Clearly Contaminated Area Soil Volumes				
Volume of Soil Requiring Remediation	233,000	18,000	64,400	515,400
Number of Truckloads	11,710	1,125	4,325	18,300
Days of Operation (years)	3.6	0.1	0.1	3.8
3) Chemical Look-Up Table Preliminary Remediation Area Soil Volumes				
Volume of Soil Requiring Remediation	997,000	74,000	8,400	1,079,400
Number of Truckloads	62,315	4,825	535	67,480
Days of Operation (years)	7.3	0.5	0.1	7.7
3) Upper Range Soil Volumes				
Volume of Soil Requiring Remediation	1,585,000	82,000	400	1,667,400
Number of Truckloads	94,245	5,125	15	104,310
Days of Operation (years)	13.1	0.6	<0.1	13.9

Notes

- Criteria for identifying Chemical Clearly Contaminated Area, Chemical Look-Up Table PRMs, Upper Range, and biological soil volumes is provided in the text of this document.
- Volume estimates are based on validated data available as of August 2013 and are considered preliminary, working draft RCM estimates that will need refinement once validated data is available for all volumes and/or during remedial planning.
- For truckload transport planning, an average volume of 18 cubic yards per truckload has been assumed based on previous soil removal actions at SFL.
- Truckloads estimated assuming 10 truckloads allowed per day, 5 days per week, 50 weeks per year. Does not include allowance for 90% or better truck loading property.

Assuming that the problem could be overcome, my ridiculous fantasy was that military vehicles could surround the trucks carrying contaminants to protect themselves from the public even if this would shut down all traffic for the next 10+ years. We now see, but I am not surprised, that any vehicle, including a military vehicle is subject to a crash and thus catastrophic results.



Military Vehicle Crashes on I-5 Near Camp Pendleton
A military vehicle crashed Sunday morning near Camp Pendleton, halting traffic on...
4.nbcla.com

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If the truck is carrying radioactive materials, "butter", toxic chemicals, etc., the rules change, you are no longer miles away, you could be feet away, there could be a cloud of particulate, dust, blowing on those who lived 50 miles away and were statistically safe, dust doesn't go by the same butter gun rules. The threat now propagates from a fixed area (now designated as a national monument by the same people looking to level the SSFL, the motivation for that act I will never understand), to the potential of actively contaminating cities, counties, or states by removing contaminants from an otherwise stable site. It is a dangerous proposition to have fear, parents looking for explanations for what is currently unexplainable, panic, and politicians (who disbelieve in science) make technical decisions. Unfortunately, it is also dangerous when a scientific community like NASA, feels reasonable guilt because they screwed up and overly compensate for their guilt by agreeing to further irrational conduct to make the community happy, in the end we are all harmed. It is notable that no decision on this issue has ever been adjudicated, i.e., decided by a court of law after having been presented with the available and uncontroverted facts, this is referred to as the Frye standard, something which does not appear to have been applied here. Instead, as is typically done, a corporation has accepted an out of court settlement. This is not unusual since it expedites a solution and minimizes legal costs. The repercussions of this settlement are more horrendous than the existing problem and should be presented for a full judicial hearing and decision according to the rule of law including the Frye standard.

Thus, in summary, although there is no medical evidence that supports a cleanup at all, I do need to defer to the testing that does show some level of 50-year-old contamination existing but not a risk to the existing population. There is clearly no need to build housing (which large portions of the local community already object to anywhere in Los Angeles) at the SSFL or to make it into farm land. Thus, in respect and deference to those who are actual environmentalists and hike the site as well as the declaration of the site as a national monument, I do support the minimal cleanup standard which I understand to be referenced as the residential standard. I also support additional medical studies which could alter my position and the positions of others, I do support preserving the health and safety of the members of our community.

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- 56-5 This Final EIS analyzes the cleanup of DOE-administered portions of Area IV and the NBZ. NASA activities at SSFL are considered as a part of cumulative impacts (Chapter 5).
- 56-6 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.
- 56-7 DOE acknowledges your support for a residential-based cleanup standard. In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easements (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 57: Brian Holguin
Samala (Santa Ynez) Band of Chumash Indians

March, 2017.
*Comments and Concerns Regarding the Department of Energy's
Draft Environmental Impact Survey:*

Regarding Building Removal Plan:

Archeological or cultural resources are not expected to be effected as per archaeological survey and I am assuming due to the degree of soil disturbance that occurred during the construction. My concern is the age of these buildings, as I believe their construction occurred prior to the required presence of Native American or archaeological monitoring. It is possible for there to be a sub-surface component in the surrounding area, although I agree it is likely to be disturbed. However, given the importance of the pictograph sites on NASA's property, and the region as a whole, there is likely to be some form of a cemetery within the SSFL. While this has yet to be verified, it is good to keep in mind as the possibility it is uncovered under or around the buildings designated for removal does exist.

Would it be possible for you to provide the Sacred Sites Council, or consulting Native American groups with a copy of the records or plans created prior to the erecting of the buildings now destined for removal? I do not speak for everyone but I know that I, at least, would like to evaluate them. I would also like to know if the removal of the buildings will be monitored by NA groups or archaeologically?

Regarding Unanticipated Discovery of Cultural Resources:

I am concerned with this topic for a few reasons, the first of which surrounds monitoring. Since areas are projected to have more cultural significance than others, will only those at higher risk be monitored by NA groups and archaeologists, or will the entire soil removal process be monitored? In areas where clean-up will alter our pre-historic/historic cultural sites, will their removal be systematic or will it be removed in bulk with excavators?

Second, I know Area 4 and the NBZs were surveyed by a few CRM companies in the past, yet to my knowledge the majority of the known sites, including those which Stephan Bryne and Leidos ground-truthed, were identified by JMA about four years ago. When JMA identified all of the additional site locations, it was while they were monitoring, not surveying. This leads me to suspect other sites may have also been missed by past archaeological surveys and have yet to be identified within the boundary of area 4 and the NBZ. The possibility of a cemetery in the region (previously mentioned above), is a concern raised by the incomplete survey of A4 and the NBZ. It is also possible some sites lack surface evidence due to rain, wind, and even heavy traffic in certain locations. I address this not to lobby for a re-survey of A4 or the NBZ, but reveal the higher likelihood that other sites are present throughout the afore mentioned areas.

Best Regards,
Brian Holguin
Samala (Santa Ynez) Band of Chumash Indians
[Redacted]

57-1

57-1 DOE acknowledges that archaeological sites could be present beneath existing foundations, subsurface vaults, or concrete slabs. For this reason, as described in Chapter 4, Section 4.11.2.2, DOE will comply with applicable regulations and the NHPA Section 106 Programmatic Agreement currently under development in the unlikely event that unexpected archaeological resources are discovered during building demolitions.

57-2

57-2 EPA included photographs and drawings in the historical site assessment documents it developed as part of the radiological characterization of Area IV. The *Final Historical Site Assessment, Santa Susana Field Laboratory Site, Area IV Radiological Study, Ventura County, California* (HGL 2012a), prepared by HydroGeoLogic for EPA, can be found at www.SSFLAreaIVEIS.com, under "References" for Chapters 1 through 8.

57-3

57-3 In accordance with the Section 106 Programmatic Agreement currently under development, DOE will prepare a monitoring plan before ground-disturbing activities begin, and DOE will consult with the California SHPO, the Santa Ynez Band of Chumash Indians, and other tribes to determine where and when Native American monitoring is appropriate for building removal, groundwater cleanup, and soil cleanup. Additionally, at a minimum, archaeological monitors (cultural resources specialist) would be present where there are known archaeological sites, including ground disturbing activities within the buffer zones (protective areas) established around the archaeological sites.

57-4

57-4 If cleanup requires alteration to a known archaeological site, cleanup excavations will be performed in a careful, systematic fashion. In accordance with the Section 106 Programmatic Agreement currently under development, measures to minimize adverse effects on a historic property, like using careful cleanup methods, would be addressed in a Historic Properties Treatment Plan prior to ground disturbing soil clean-up activities. Please also see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process that will be used to determine exemptions.

57-5

57-5 In the years after John Minch and Associates, Inc. (JMA) reported on the sites located while monitoring, DOE conducted archaeological surveys at locations of monitoring wells, soil sampling, and weed abatement in Area IV and the NBZ. No previously unknown or unrecorded archaeological sites were found. However, as noted in Chapter 4, Section 4.11 of this Final EIS, the possibility of unanticipated archaeological resource exists, and this could include burial sites. For this reason,

Commenter No. 57 (cont'd): Brian Holguin
Samala (Santa Ynez) Band of Chumash Indians

the NHPA Section 106 Programmatic Agreement (being developed by DOE in consultation with the California SHPO, the Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties) will include procedures for the development of a monitoring plan and an inadvertent discovery plan that spells out steps to follow if cleanup activities inadvertently encounter archaeological resources, human remains, or burial-related artifacts.

Commenter No. 58: Virginia Swanson

RE: Comment on SSFL Draft Environmental Impact Statement

Please decide to have the Dept of Energy fulfill the legally binding clean-up agreement to extract and remove all radioactive contamination from the Santa Susana Field Lab. I have lived near the lab in the SF Valley for over 50 years and have seen several friends die from gastric and esophageal cancers. I would like to be able to see my grand kids and their descendants live a normal life. Please demand the Department of Energy clean up the SSFL as promised in 2010. Please feel free to call me [redacted] for further information.

Signed: Virginia M Swanson

58-1

58-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

58-2

58-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of data on offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

58-1 cont'd

Commenter No. 59: Charles Swanson

RE: Comment on SSFL Draft Environmental Impact Statement

I demand you enforce the 2010 Clean-Up agreement signed by the Department of Energy for a 100% cleanup of the Santa Susana Field Lab. Do not let the Dept of Energy breach this agreement which is legal and binding. Too many people have died of cancer due to this contaminated site which continues to reign radioactivity on this community. DO NOT LET THE Department of Energy walk away from their responsibility!!

Signed:

Charles Swanson

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59-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

59-2

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Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of illnesses within the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. As can be seen in the discussion in Section 2.7, "Offsite Impacts," of this CRD there is no evidence of major amounts of Area IV contamination leaving SSFL. (Groundwater plumes extend from Area IV into the NBZ but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.)

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Commenter No. 60: Kathy Lupper

RE: Comment on SSFL Draft Environmental Impact Statement

To whom it may concern,

I have lived in Simi Valley all my life, since 1962. I have 2 daughters with my oldest being 27 years old. She was born w/ 6 major birth defects with a few other anomalies thrown in for good measure. All her defects were things I had never heard of before; imperate anus? tetralogy of Fallot? Her dad and I have lost count of all her hospitalizations and surgeries, maybe 15-20 surgeries - 30 hosp. visits. Our specialist on the East Coast heard of Simi Valley because he had other patients from our fair city! I thought this matter was taken care of years ago. Signed: Kathy Lupper
Shame on you for sitting on your hands - Delay Delay Del.

60-1

60-1

Please refer to Sections 2.7, "Offsite Impacts," and 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussions of contamination and illnesses within the vicinity of SSFL. Over the life of SSFL, there has been action taken to clean up Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 61: Members of the Green Building Alliance



March 5, 2017

To: Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Ms. Stephanie Jennings,
I am concerned that the Department of Energy's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup is using the short term environmental impacts of the remediation work as an excuse to leave much of the radioactive and carcinogenic chemical pollution on site with longer term impacts. The DOE has the responsibility, as does Boeing and NASA, to remove the long term community and environmental hazards associated with the remaining pollution at the SSFL site. I acknowledge the great scientific work produced at the SSFL that enabled the U.S. to go into space, however we expect the DOE to clean up the site so that it can be celebrated by the community as a monument to American ingenuity.

The DOE should respect the 2010 Administrative Order of Consent (AOC) agreement (as described in the DEIS Section 1-7) and provide no less than full site cleanup. Any "leave in place" cleanup methods, including natural attenuation and "no action" methods should not be considered. The AOC is a legally binding agreement with the California Department of Toxic Substance Control (DTSC), and the DTSC should continue to manage the extent of the cleanup. We request adherence to the 2010 AOC Agreement in full, and maintain that the

- 61-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for further discussion of this topic. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public, both in the short term and the long term. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.
- 61-2 DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC. The 2010 AOC and its legal implications are discussed in Chapter 1, Section 1.4 of this Final EIS. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and for DOE's response.

Commenter No. 61 (cont'd): Members of the Green Building Alliance

management of the cleanup remain with the California DTSC.

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DOE's recently submitted DEIS and its proposed options for cleanup make it clear that DOE wants to abandon its 2010 commitment to clean up all of its contamination at SSFL (See DEIS Soil Remediation Alternative S.10.2). Instead, the DOE proposes leaving between 39% and 99% of the dangerous radionuclides and toxic chemicals on site, not cleaned up, where they will continue to migrate and put nearby communities at risk. The long term damage to the ecosystem, watershed and biological environment outweigh the short term impacts of full cleanup to the natural ecosystem and cultural artifacts on the site. This site is at the headwaters of rivers that flow through Simi Valley through Ventura County and through the San Fernando Valley through Los Angeles County.

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Although complete remediation of the toxic materials on the site is more expensive to the DOE, the alternative long term cost to the nearby communities will be even greater in terms of illness, ongoing pollution to the water table and ongoing medical care for the community. The pollution onsite has already migrated into the adjacent populated areas via rainwater runoff, prevailing westerly winds, and via natural fires as evidenced by increased local cancer rates among nearby residents as identified by the September 1997 Tricounty Regional Cancer Registry that shows increases in lung and bronchial cancers, the March 2007 University of Michigan identifying increases in thyroid cancer cases, and the 2012 California Breast Cancer Mapping project that identified a 10-20% increase in breast cancers for people living in the vicinity of SSFL. We have the opportunity to clean up the site once and for all and the time is now.

|| 61-4

Large amounts of water will be used to control dust during the full removal of the hazardous soil, and if the DOE can use reclaimed water for that purpose, this will be more sustainable than using our valuable potable water resource for dust control.

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If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will continue to experience increased risk of cancer and illnesses related to exposure to SSFL contaminants. The DEIS Appendix G identified 28 found radionuclides, and 56 additional toxic chemicals including PCB's, PAH's,

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- 61-3 DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the remedial action alternatives would be protective of human health and the environment. Please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion about offsite impacts and DOE's response. As described in Section 2.7 of this CRD, DOE is confident that significant levels of contamination originating in Area IV have not travelled offsite and, based on modeling results, believes they will not move off site during or after remediation activities. As discussed in Chapter 3, Section 3.4, of this EIS, the monitoring well network established for Area IV and the NBZ demonstrates that the contaminants have not moved laterally off of DOE-administered areas of Area IV and the NBZ. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.
- 61-4 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The commenter is correct regarding the range of constituents that have been detected from the extensive sampling and characterization of soil in Area IV and the NBZ. Please refer to Section 2.5, "Toxicity of Soil Contaminants," of this CRD for a discussion of the relevance of exposure parameters in determining whether a constituent presents a health risk.
- 61-5 DOE agrees that use of reclaimed water would be desirable for dust control. Chapter 7, Table 7-1, of this EIS, summarizes the applicability of greener cleanup using best management practices in DOE's remediation activities. In this table, DOE addresses the potential for use of reclaimed water for such activities as dust control or wash water. Sources of water could include captured stormwater runoff or treated extracted groundwater. The use of captured stormwater runoff, however, would require coordination with the landowner (Boeing), and the use of treated extracted

Commenter No. 61 (cont'd): Members of the Green Building Alliance

groundwater (a minor potential source of reclaimed water). That source would require approval by the State of California. DOE is not considering construction of a parallel reclaimed water distribution system for site reclamation activities because such a distribution system would need to pass through urbanized areas and then up the steep slope to SSFL, and it would potentially result in additional environmental impacts.

Commenter No. 61 (cont'd): Members of the Green Building Alliance

dioxins, petroleum chemicals, mercury and silver. The Agency for Toxic Substances and Disease Registry identifies many of these as chemicals known to cause various cancers, and are classified as Group 1 carcinogens to humans by the International Agency for Research on Cancer. We request your faithful dedication in protecting the health of our communities and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up all SSFL contamination. We look forward to the day when the site has been cleaned up, and we can celebrate the achievements of the Southern California aerospace industry at this historical site. Thank you.

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Sincerely,
Members of the Green Building Alliance

Paul Poirier, Poirier + Associates Architects, [REDACTED]

Andrulaitis + Mixon Architects, [REDACTED]

Isabelle Greene & Associates Landscape Architects, [REDACTED]

Linda Adams Interior Design, [REDACTED]

Dennis Thompson, Thompson Naylor Architects, [REDACTED]

John Kelley, AIA, [REDACTED]

Arcadia Studio Landscape Architecture, [REDACTED]

Karen Feeney, [REDACTED]

Chris Gilliland, CommonGround Landscape Architecture, [REDACTED]

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Commenter No. 62: Paul Poirier

March 5, 2017

To: Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Stephanie Jennings,

I am a former resident of the Canoga Park/ West Hills area having spent the first 18 years of my life there from 1961 to 1979. I currently live in Santa Barbara, however my mother still lives in the area as do a few of my old time friends. I am concerned that the Department of Energy's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup is using the short term environmental impacts of the remediation work as an excuse to leave much of the pollution on site with longer term impacts. The DOE has the responsibility, as does Boeing and NASA, to remove the long term community and environmental hazards associated with the remaining pollution at the SSFL site. I acknowledge the great scientific work produced at the SSFL that enabled the U.S. to accomplish and we expect the DOE to clean up the site so that it can be celebrated by the community as a monument to American Ingenuity.

I went to Our Lady of the Valley School and later to Chaminade High School, both within the shadow of the Santa Susana Field Lab (SSFL). I remember hearing the rocket engines going off at the top of the mountain and seeing a plume of smoke up at the SSFL on occasion from our play yard. I also remember many of my classmates and members of other parish families suffering from leukemia and other cancers as a child in grade school. Many of the students' fathers worked in the local aerospace industry and we were proud of their hard, groundbreaking work to send men into space at Rocketdyne and the other companies. We all spent a lot of time outdoors, as the weather was often warm and there was an abundance of open space to rock climb,

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62-1 DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information, including necessary steps prior to continuing cleanup. The purpose of the EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public, both in the short term and the long term. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

62-2 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The commenter is correct regarding the range of constituents that have been detected from the extensive sampling and characterization of soil in Area IV and the NBZ. Please refer to Section 2.5, "Toxicity of Soil Contaminants," of this CRD for a discussion of the relevance of exposure parameters in determining whether a constituent presents a health risk.

Commenter No. 62 (cont'd): Paul Poirier

hike and bike. We ate the peaches off our own peach trees, drank the milk from the local Giacopuzzi dairy, and ate local eggs from the Traffcanda egg ranch. Now in my 50's many of my grade school classmates (OLV class of 75) and high school friends (Chaminade class of 79) have died or are getting cancer at an alarming rate. Many of these people, like me, no longer live in the area of the SSFL, and do not show up on the studies of the cancer occurrence among the immediate current residents near to the SSFL. It doesn't seem normal to have 5 high school friends die of cancer in the last three years, and have many others suffering from cancer. Chaminade was a small school back in 1979! It seems like the natural environment and the local community were unknowingly put at risk from the unknown risks associated with the activities at the SSFL. The DOE has now quantified the precise risk that the community has been exposed to, and there is no excuse not to clean it up completely now. Money will have to be spent to resolve this issue, either by the DOE and a full cleanup, or by the community in perpetuity for medical bills dealing with the cancers that will continue to result. The amount of money to completely clean up the site is small when compared to the total budget for the space and nuclear programs of the 1950's and 1960's developed at the SSFL. I believe that the humane solution is for the DOE to complete the full cleanup promised and agreed to in 2010, so that future residents of this area do not have to go through the illnesses that past and current residents are dealing with.

A basic philosophy of the U.S. Green Building Council, of which I am a member, is to balance the health of the environment, the people and the economy in order for all three to thrive. The past activities at the SSFL resulted in pollution that has damaged the health of the environment and the adjacent community. The DOE can restore the balance by proceeding with a full cleanup of all toxic chemicals and radioactive materials at the site, so that the environment, community and economy in this area can continue to heal and thrive. I think that it would be appropriate to err on the side of caution, given the unfortunate exposure to carcinogens and known toxins to both the environment and the community in the past.

The DOE should respect the 2010 Administrative Order of Consent (AOC) agreement (as described in the DEIS Section 1-7) and provide no less than full site cleanup. Any

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Commenter No. 62 (cont'd): Paul Poirier

"leave in place" cleanup methods, including natural attenuation and "no action" methods should not be considered. The AOC is a legally binding agreement with the California Department of Toxic Substance Control (DTSC), and the DTSC should continue to manage the extent of the cleanup. The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the California DTSC is the regulator who decides cleanup requirements for these toxic chemicals. We request adherence to the 2010 AOC Agreement in full, and maintain that the management of the cleanup remain with the California DTSC.

DOE's recently submitted DEIS and its proposed options for cleanup make it clear that DOE wants to abandon its 2010 commitment to clean up all of its contamination at SSFL (See DEIS Soil Remediation Alternative S.10.2). Instead, the DOE proposes leaving between 39% and 99% of the dangerous radionuclides and toxic chemicals on site, not cleaned up, where they will continue to migrate and put nearby communities at risk. The long term damage to the ecosystem, watershed and biological environment outweigh the short term impacts of full cleanup to the natural ecosystem and cultural artifacts on the site.

Although complete remediation of the toxic materials on the site is more expensive to the DOE, the alternative long term cost to the nearby communities will be even greater in terms of illness, ongoing pollution to the water table and ongoing medical care for the community. The pollution onsite has already migrated into the adjacent populated areas via rainwater runoff, prevailing westerly winds, and via natural fires as evidenced by increased local cancer rates among nearby residents as identified by the September 1997 Tricounty Regional Cancer Registry that shows increases in lung and bronchial cancers, the March 2007 University of Michigan Identifying Increases In thyroid cancer cases, and the 2012 California Breast Cancer Mapping project that identified a 10-20% increase in breast cancers for people living in the vicinity of SSFL. We have the opportunity to clean up the site once and for all and the time is now.

Large amounts of water will be used to control dust during the full removal of the hazardous soil, and if the DOE can use reclaimed water for that purpose, this will be

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DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC. Discussion of the 2010 AOC and the legal implications are discussed in Chapter 1, Section 1.4 of this Final EIS. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response.

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Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

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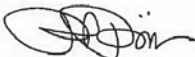
DOE agrees that use of reclaimed water would be desirable for dust control. Chapter 7, Table 7-1, of this EIS, summarizes the applicability of greener cleanup using best management practices in DOE's remediation activities. In this table, DOE addresses the potential for use of reclaimed water for activities such as dust control or wash water. Sources of water could include captured stormwater runoff or treated

Commenter No. 62 (cont'd): Paul Poirier

more sustainable than using our valuable potable water resource for dust control.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will continue to experience increased risk of cancer and illnesses related to exposure to SSFL contaminants. The DEIS Appendix G identified 28 found radionuclides, and 56 additional toxic chemicals including PCB's, PAH's, dioxins, petroleum chemicals, mercury and silver. The Agency for Toxic Substances and Disease Registry identifies many of these as chemicals known to cause various cancers, and are classified as Group 1 Carcinogens to humans by the International Agency for Research on Cancer. We request your faithful dedication in protecting the health of our communities and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up all SSFL contamination. We look forward to the day when the site has been cleaned up, and we can celebrate the achievements of the Southern California aerospace industry at this historical site. Thank you.

Sincerely,



Paul Poirier, [Redacted]
[Redacted]

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extracted groundwater. The use of captured stormwater runoff, however, would require coordination with the landowner (Boeing), and the use of treated extracted groundwater (a minor potential source of reclaimed water). That source would require approval by the State of California. DOE is not considering construction of a parallel reclaimed water distribution system for site reclamation activities because such a distribution system would need to pass through urbanized areas and then up the steep slope to SSFL, and it would potentially result in additional environmental impacts.

Commenter No. 63: Christina Walsh
Peoplepolicy.org

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CHRISTINA WALSH — DRAFT EIS COMMENTS

PEOPLEPOLICY.ORG



Draft Environmental Impact Statement for

Remediation of Area IV and the Northern Buffer Zone(s) of the Santa Susana Field Laboratory

Comments Prepared for: Department of Energy, Attention Stephanie Jennings, NEPA Document Manager

Comments Prepared by: Christina Walsh, peoplepolicy.org, 8463 Melba Avenue, West Hills, CA 91304

April 11, 2017

Comments for: DraftSSFL AreaIV EIS

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Commenter No. 63 (cont'd): Christina Walsh
Peoplepolicy.org

SUMMARY

Overall Comments:

Serious over reach of exceptions for implementation of AOC agreement. At the same time, the exceptions proposed are not considered in the very large estimates of truck and soil volume, so the math isn't right, and creates a false sense of massive trucks. Graphic displays during scoping and preliminary presentation meeting for comment period focused on mountains of unnecessary truck volumes and almost ZERO focus on the contaminants that are well established as cancer causing constituents of concern. I want to fully support the implementation of the AOC using background AND the exceptions, but they have to be right, and not an exaggeration to minimize the cleanup needed. We need the exceptions to be real, defensible, and based on science and data and a transparent effort to explain those decisions to the public so that they will be understood and respected. This only works if the data presented is accurate and the polluters need to stand for that data and not allow/entice special interest groups to do the bidding for the polluters to minimize the need for cleanup of clearly toxic materials, debris, and water (ground and surface).

Primary Concerns:

As long as the polluters are not willing to stand for accurate information, it will always be very difficult to get any shared understanding about the issues with such divisive antics being tolerated to spin and manipulate the public using fear of contamination, fear of trucks, fear of dust, and fear of change. We need real decisions, real options, real transportation routes and real regulations to truck and transportation process. When is it gonna get real? My primary concerns are really about the fact that so much time has been spent that could have been used to use less destructive passive methods of in situ treatment, now all dismissed, and the frustration by the community of waiting, coupled with fear derived from a "Fear trucks" campaign by SSFL CAG and polluters are leading some to prefer to be "finished now" because we are tired of waiting. We cannot skip the hard work because of this frustration. Many buildings were excluded from investigation, where we were told that they would be handled later, and now, there is a proposal to do nothing again. This feels like betrayal, and promises of cleanup that includes demolition and remediation of these important structures need to be kept.

Inaccurate maps of proposed cleanup areas have been distributed through polluter-supported channels without correction from regulator nor from polluter:

SSFL CAG distributed, held meetings, as well as social media describing all three alternatives as "AOC compliant, which was used to vote on group letters written by West Hills Neighborhood Council who was under the impression that all three alternatives were compliant with the AOC as signed, and therefore voted for the least costly. In this same communication campaign, maps and charts were altered and DTSC and DOE both refused to

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63-1 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. DOE's response concerning the proposed exemption areas explains, among other things, how they were mapped and how they would be investigated and remediated. The identified exemption areas for sensitive and cultural resources are based on consultations with the USFWS, California Fish and Wildlife Service, SHPO, Santa Ynez Band of Chumash Indians, and SSFL Sacred Sites Council. The maps in this EIS are at a small scale and are not intended to show the detail that would go into the final remediation planning. This planning would culminate in preparation of detailed remediation plans that would include point-by-point analysis and site-specific plans for remediation.

The estimates of soil volume and associated truck trips noted in your comment were based on the soils that would be removed outside the proposed exemption areas. So the total truckloads and soil volumes were not overestimated in the EIS or public hearing presentation slides. The numbers would be somewhat larger if the actual amount of soil that would be removed from within the proposed exemption areas identified in this EIS were included. Commenters have inferred that exemption areas would be treated as untouchable and would not be subject to any cleanup. This is not the case. Rather, exemption areas are established to protect certain biological and cultural resources, in accordance with the process described in the USFWS Biological Opinion and the NHPA Section 106 Programmatic Agreement (being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC). As indicated in Chapter 2, Section 2.3.2, of this EIS, if levels of constituents in these areas pose a risk to human health or the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals that would result in minimal disturbance.

Disturbed areas within proposed exemption areas would be thoroughly investigated and chemicals or radionuclides exceeding risk-based criteria to protect human health would be subject to focused removal actions. The maps in the EIS include sites within exemption areas that may require remediation, but were included in the proposed exemption areas because they also have listed species growing immediately adjacent to them or sometimes on them (e.g., cracks in pavement). Examples of where this is the case include the Sodium Reactor Experiment (SRE) Complex and the Radioactive Materials Handling Facility (RMHF). These sites will be cleaned up using risk-based criteria to protect human health and careful remediation approaches to minimize unnecessary damage to sensitive species or cultural resources.

Commenter No. 63 (cont'd): Christina Walsh
Peoplepolicy.org

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CHRISTINA WALSH – DRAFT EIS COMMENTS

PEOPLEPOLICY.ORG

correct. For this reason, the comments from these groups recommending a lesser cleanup should be considered with less weight, based on the vote being based on false information.

Exception Overreach (AOC defined exceptions) as presented in Draft EIS:

Areas of site where exception overreach has occurred based on maps provided in the EIS summary and detail reports and supporting documents. Based on the green shading shown on these maps, areas of serious operations, which are not "natural" but instead are pavement or open lots that used to be pavement and building footprints. Further, the green shading in the areas mentioned below, preclude areas which are currently known to be contaminated based on ARRA EPA Survey as well as operational history that includes 18 pages of "incidents that resulted in releases to the environment."

- SRE
- Hot Cave area
- Old Conservation Yard/New Conservation Yard
- SRE Pond and tarp areas
- Hot Lab parking/storage area
- Building 55 perimeter as well as contents which has had very limited sampling.
- Building 100 "backyard area
- Building 19 "backyard area
- Building 56 Landfill
- Building 56 Landfill Excavation Area
- Esada/Shooting Range
- Area IV Burnpit drainage rock outcroppings
- RMHF
- RMHF Holdup Tank Area
- RMHF Dam Area and hillside
- Building 4024 Driveway tank area
- Buffer Zone road area (80 barrel debris area)
- Building 100 Trench

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During the conduct of its gamma radiation surveys, EPA used the term "gamma radiation anomaly" (or GRA) to identify locations where gamma emission readings were observed to be above background. EPA, however, made it clear during the course of its investigation that observation of gamma readings was not an indication of contamination. Gamma readings varied based on proximity to anthropomorphic materials such as concrete and asphalt, and changes in the geology. EPA used the results of its soil sampling, not gamma readings, to identify soil contamination. In its final report (HGL 2012b) EPA describes five locations as radiological areas of interest. These were not termed GRA's. These locations are the RMHF complex, SRE complex, 17th Street Drainage, Former Fuel Element Storage Facility, and New Conservation Yard Drainage. Although several of these locations overlap with the proposed exemption area to protect the Santa Susana Tar plant, the exemption process was not established to avoid cleanup, but to take extra precautions during cleanup to protect endangered species. Any soil exceeding risk-based standards will be remediated in these exemption areas.

The 130 acres in your comment refers to land that would be affected by remediation outside the proposed exemption area. (Note that in the Final EIS this number has been revised to 150 acres.) As noted in your comment, this land does include "previously disturbed, paved, former slabs and infrastructure that has been altered from its natural state." Table 4-26 of this EIS gives an accounting of the areas that would be affected by remediation and lists 20.3 acres of "unvegetated disturbed/developed" and 8 acres of "weed-dominated formerly disturbed" habitat among the 90 acres affected by soil remediation under cleanup to 2010 AOC LUT values. These previously disturbed areas, which total 28 acres, generally would have less habitat value compared to the remainder of the 90 acres.

Also, refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for a discussion of the current status of Area IV.

63-2 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.

DOE considered several *in situ* soil treatment options. Most of these options were determined to be ineffective or impractical at reducing contaminant levels to the required levels. The EIS provided the reasons for dismissing each of these alternatives in Chapter 2, Section 2.2.3. As discussed in Section 2.3.2, however, one potentially effective form of onsite remediation could be to use monitored natural attenuation for management of certain low-concentration, petroleum-contaminated (TPH) soil. DOE has estimated that this onsite treatment method would reduce the amount of soil to

Commenter No. 63 (cont'd): Christina Walsh
Peoplepolicy.org

COMMENTS

Cover Sheet

The "abstract" describes the EIS as having no preferred alternative, but the alternatives presented inflate the truck traffic and other impacts and does not consider the cost of the "no action" alternative through negative exposures to residual toxic materials as a result of not remediating the site. In fact, there is very little mention in the thousands of pages, about the risks related to these toxic materials, and that erosion, rain, wind, as well as recent and future brush fires add risk to the surrounding population by burning contaminated vegetation.

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While it is true that DOE is proposing three alternatives, they are not reflective of the community included process to develop a variety of solutions for cleanup of the site. In this way, it seems that the process was not very serious, and instead was a way to make the community "feel" included, while not really considering the concerns and recommendations in any real way. The "conservation" alternative is painted as a way to conserve open space, but instead ignores the known problem areas as defined by the data presented in the EIS. In other words, the methods and priorities described in the EIS are not based on the concerns shared by the community, but instead seems to excuse inaction that would leave future residents at higher risk of exposure, where little to no information would be available about the potential risks as they are not adequately described even here, in mid-investigation. This puts future generations at greater risk.

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Abstract claims the EIS report will "inform decision-makers and the public about the potential impacts of the proposed cleanup of both chemicals and radionuclides and will be considered along with other relevant factors in making decisions regarding cleanup of Area IV and the adjoining NBZ," but fails to adequately describe the risks of leaving chemicals and radionuclides behind that clearly exceed health-risk standards. Instead, the reader is wow'd by numbers of trucks, truck emissions, dust, and suggesting that cultural resource areas will demolished during cleanup to create a false choice.

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Public Involvement

The EIS describes activities undertaken by DOE to involve the public and seek input from the affected public and describes "Community Alternative Development Workshops" in which "community members were asked to articulate their preferences for alternatives that they would like to see included in the EIS." The public was divided into groups who each developed priorities and concerns related to the public representatives participating in each group. This was done as a "saturday session" where the various groups were combined into four major alternative approaches. As a participant in the process, I was disappointed to first have my preferences mischaracterized, which after spending several hours, thinking this was taken seriously. While I was disappointed to see the alternatives mischaracterized at the time, I am even more baffled to find that NONE of the alternatives are described within the EIS alternatives presented herein. Instead, more false choices are presented by exaggerating

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be considered for removal at Area IV and the NBZ by about 620,000 cubic yards, with corresponding reductions in truck traffic and emissions of air pollutants. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans.) This or any other onsite treatment method would have to be approved by DTSC.

DOE's intent is not to generate opposition to the SSFL cleanup, but it is true that the more soil that is removed to clean up the site, the more transportation will be required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. Results of the analyses allow a comparison of potential impacts, in this case transportation impacts, and tradeoffs between the alternatives. In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Finally, as discussed in Chapter 2, Section 2.4.4, of the EIS, please note that DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of trucks allowed on Woolsey Canyon Road to 96, and would dispatch trucks from the site at intervals of no less than 5 minutes. In this Final EIS, DOE (after consideration of budget and operational constraints) has incorporated a more realistic estimate of 16 truck round trips per day on Woolsey Canyon Road. The impacts of this reduction in truck traffic have been incorporated into the analysis of all three of the soil remediation action alternatives. This change would reduce the daily and annual risks and other environmental impacts, however, it would not reduce the overall risks or impacts determined for an alternative but would only spread them over a longer period of time.

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This EIS evaluates separate sets of alternatives for soil remediation and for building demolition. As required by NEPA regulations, there is a No Action Alternative included for building demolition, which provides a base case against which action alternatives can be compared. The proposed action for building demolition is to remove all 18 buildings owned by DOE in Area IV. This includes the structures and asphalt comprising the RMHF. The Conservation of Natural Resources Alternative is a soil remediation alternative, not a building demolition alternative. Under all three

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the areas to be exempted as per the exception clauses in the AOC. In addition to exaggerating the areas to be exempted, to cover known problem areas that are former slabs, facilities, burn pits, land fills, etc. The purpose of the exceptions are to protect natural resources, rare species and habitat, and cultural sites as identified by local and federally recognized native tribes. The areas shaded in green in the maps contained in EIS include areas covered in pavement, concrete, and former serious impact areas, including designated GRA's as identified by U.S. EPA during the 2012 radiation survey funded through the American Reinvestment and Recovery Act (ARRA). This overreach is inappropriate and should be corrected prior to final publication of the EIS. [Examples listed herein]

Scoping periods described which were conducted in April of 2014 as well as most recent comment meetings for the purpose of this EIS spend the majority of time describing the impacts without the proper context of the reason for the highly protective AOC cleanup, including decades of inaction, water quality and other environmental violations and general lack of control over surface water discharge leaving the site during heavy rain periods as a result of extremely steep terrain, and decades of discharge through operations at Santa Susana.

Inadequate time spent describing historic site activities presents a false narrative that there was no discharge or harm/risk from Santa Susana to the neighboring areas. Even if we are to completely discount the events that took place at the SRE (Sodium Reactor Experiment) in July of 1959, there were decades of operations that included discharge of chemicals and radionuclides to the environment. This includes burn pits that operated for decades under the cover of "Ventura County Burn Days" and these operations alone, would potentially cause a random impact of the surrounding areas that cannot be "mapped." Even using wind roses, we can only estimate, and given that burn pit activities were used to "test to destruction" or eliminate waste which was toxic, burning it would certainly be problematic. Further, the burning of these wastes would also provide an unreliable understanding of "where the waste may have blown" over the course of decades that included subsequent brush fires that burned more than 70% of the site.

Through the use of surrogates such as the SSFL CAG which is funded by DOE, an alternative narrative which blames radioactive impacts on Chernobyl, and other global events is inappropriate and has created a false understanding in the public surrounding the site. These excuse-based theories that blame other possible contributors, coupled with exaggerations on truck and traffic estimates have created a false anxiety among local residents who believe a truck every two to three minutes will leave the site for decades.

By also conflating the soil removal estimates with replacement soils as if it is a one for one replacement process also creates additional exaggeration by then multiplying all truck estimates and further claiming that no clean soil is available. This is false. Using comparisons to "Malibu Lake" has been used by this group to create fear among Calabasas and Malibu Lake residents that their soil is contaminated because it "doesn't match up." This is demonstrated by the ISRA and other recent ISEO soil removal activities that took place at outfalls 8 and 9 as well as the Northern Drainage and Sage Ranch Park where "re-contouring" was used almost exclusively. During a recent visit to see "Happy Valley" with the Regional Board, and the Stormwater Expert Panel who has been working on improving these source areas, we were told that ZERO soil was brought in, and through the use of re-contouring and culvert modifications, combined with installation of treatment train filtration systems, these areas were improved with zero replacement soil. If Boeing can do it, why can't DOE? There is no reason to need large

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63-4 DOE has no control over maps or presentations made by other members of the community.

63-5 Please see Section 2.1, "Preferences for Cleanup," of this CRD for a response to comments about alternative selection. In response to comments, DOE has added a quantitative evaluation of human health impacts to potential onsite post-remediation receptors for all alternatives. These post-remediation receptor scenarios include a recreational receptor and an onsite suburban resident (without garden). DOE has also added a quantitative evaluation of human health for an offsite receptors which includes the impacts from an indirect garden pathway and a quantitative evaluation of ecological impacts for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS.

63-6 DOE assumes that the commenter's reference is to the September 2005 Topanga fire, which affected much of the SSFL site. Chapter 3, Section 3.9.6, of the EIS includes a summary of damage that was sustained by brush and structures at SSFL (no structures were damaged at Area IV, however) and the environmental monitoring and sampling program conducted at SSFL and surrounding areas both during and after the fire. Additional information can be obtained by searching the DOE ETEC website (<http://www.etc.energy.gov/>) for "Topanga fire."

Chapter 3, Sections 3.9.5 and 3.9.6, of the EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measurable release of radioactive material. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by the Agency for Toxic Substances and Disease Registry estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer. With respect to the statements regarding burning radioactive and

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quantities of replacement soil. In further support of re-contouring practices, is the fact that the soil profile across Area IV and the Buffer Zones is extremely thin, so it is not expected that deep holes would be created or necessary.

S.1 Introduction

The first paragraph describes the site as having more widely spread chemical contamination and more severe than the radiological impacts, and also that "contaminants are concentrated near certain facilities, rather than being evenly distributed across the site." Yet, the only maps provided, show us little detail, instead painting nearly the entirety of Area IV in "purple" and no context of facilities for the reader to comprehend the source areas of most concern. ¹

During the radiological investigation, there were several facilities which were not included on the basis that the structures had not yet been removed, and that adequate characterization and sampling could not be conducted until building removal. The EIS describes the potential for leaving in place these buildings, several of which have not had adequate sampling or even access by EPA during the rad investigation, so it is not possible to be certain that leaving these buildings would not result in residual contamination released to the environment in the future. One example is the RMHF which is not even acknowledged in the map depicting the "conservation alternative" when it is known to have high concentrations of radiological contamination that exceeds federal public health standards, yet the reports and the presentations at scoping meetings demonstrate a lack of appreciation for the risk of these cancer-causing substances. Building 55 is another example, the radioactive materials building was also excluded from the ARRA investigation, yet suggested to be left remaining in the less protective alternatives herein.

Proposed groundwater monitored natural attenuation as described as a potential solution, again, mischaracterizes the current conditions to the public. California has a no-degradation policy for groundwater, and the site is surrounded with active seeps that release groundwater to neighboring streams including the headwater to the LA River. Some of these seeps emerge with contaminated water, including WS9a, which is south of Area IV, but receives surface water runoff from Area IV as described in the NPDES Permit by the Regional Water Quality Control Board. WS9a averages 1000ppb in TCE while 5ppb is the action level. Especially in recent higher precipitation levels, this is especially important, yet the narrative of "nothing goes off site" continues at every meeting. This fails to address the problem. Even the GETS system, doesn't help if it isn't turned on. We need solutions that are created, presented and implemented. If it's just on paper, it doesn't protect anyone.

¹ I was involved in every step of the radiological and chemical investigation and background study of the site. As a group, representing the various interests in the community, we participated in every detail of this process, the lab objectives, walking the site with the experts over the course of years. We were human witnesses of the process so that the process could be believed after so many years of disappointment and distrust. After all that, DOE publishes a Draft EIS that doesn't provide any detail or context for the public who was not involved in that step by step journey to possibly understand the nature and scope of the job at hand. Instead it's been politicized by DOE surrogates and contractors to disparage the idea of wanting our communities cleaned up. This public process interference damages the credibility of the NEPA and EIS process intended to inform the affected public and balance risk with action and impact. DOE needs to do much better, and improve trust through transparency and cease funding to special interest groups engaged in manipulation of public understanding of the facts.

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chemical waste in open pits, the Former Sodium Disposal Facility (FSDF) was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The FSDF was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

63-7 DOE incorporated the public alternative concepts into its alternatives where applicable and appropriate. Additional detail on alternative concepts that DOE evaluated (including those not incorporated from the Community Alternatives Development Workshop) are discussed in Chapter 2, Section 2.2.3, of this EIS.

63-8 As indicated in Chapter 1, Sections 1.3 and 1.4, of this EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater; and has funded radiological characterization studies of the environment in and around SSFL, including providing EPA \$1.7 million to determine the local natural background levels of radiation found in soils not affected by the site operations; and approximately \$40 million to characterize radioactivity in the soil, surface water and groundwater in Area IV and the NBZ.

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S.2 Purpose and Need for Agency Action

The EIS purpose and need fails to present the deadline penalty assessment, as described in the AOC and Agreements in Principle, at \$15,000 per day until completion of cleanup, which was due in 2017. This penalty assessment should be accurately described in the EIS as well as mechanisms for collection of penalties, and determination of satisfying requirement upon completion of cleanup.

S.3 Proposed Action

The proposed action as described in the EIS does not adequately describe the background determination process, distance test location analysis to determine potential impact from facility. There was also an acknowledgement in the written report from USEPA about the potential challenges in removing soils exceeding LUT values without potentially removing some clean soil based on error ratio and low detection levels. This was seen as the primary problem with the AOC, yet no real effort appears to have been devoted to resolving these conflicts. Instead, a broad over-reach as demonstrated by the exception shading areas, was employed. Is this a bargaining tool? My concern is that it reduces the trust level when such serious facility areas are being proposed for exclusion instead of using these exceptions responsibly.

S.4 History of the Site

Inadequate presentation of the facts surrounding need for cleanup, instead preying on the fear of cleanup dust impacts and trucks.

S.5 Future of Area IV and the Northern Buffer Zone(s)

Despite public statements made by Boeing about intent to leave as open space, this is not guaranteed. Further, the AOC, signed and agreed to by Department of Energy, does not allow store in place solutions, (or landfilling) for land use restriction or for any other reason.

S.6 Cooperating Agencies

I support the designation as a cooperating agency of the Santa Ynez Band of Chumash Indians as cultural sites require protection and oversight by native tribes. As a cooperating agency and federally recognized tribe, they should be provided priority in decisions made regarding the protection of the cultural sites present at the site.

S.7 Decisions to be Supported – Creating false choices

This section describes the EIS as evaluating reasonable alternatives for how DOE can conduct the cleanup of Area IV and NBZ, but as developed alternatives defined as "reasonable alternatives" but the alternatives described are not consistent with the requirements of the AOCs. So much time, meetings, site walks, soil remediation alternative study group were provided, which the surrounding affected community participated in for years, yet the alternatives described herein provide choices which result with leaving much of the most problematic areas behind. The AOC also requires that in situ treatment alternatives be used to the maximum extent practicable to reduce the impact of soil excavation, removal, and truck traffic. Despite this requirement, none of the many alternatives were chosen on the basis that it would not achieve the result in time for the deadline. 2017 has come

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Given the intense public interest in SSFL and as part of a public outreach program to foster public engagement, DOE has funded a number of stakeholder groups with divergent views, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap and the SSFL CAG. DOE also has engaged in stakeholder outreach with communities near SSFL. For example, DOE organized the SRE Workshop, Groundwater University and the Community Alternatives Development Workshop Series, and hosted the Site Treatability Group and the Soil Characterization Tech Stakeholder Group. Additional information may be obtained by clicking on the Community link on the DOE Energy Technology Engineering Center website (<http://www.etec.energy.gov/>).

63-9 DOE respectfully disagrees. Focused removal of localized soil contamination under the interim soil removal action cleanup (a total of about 12,000 cubic yards according to the NASA EIS [NASA 2014]) is not an equivalent action to removing most of the soil down to bedrock over a large area under the Cleanup to AOC LUT Values Alternative. As stated in the NASA EIS, "These impacts are isolated to the ISRA locations and because excavations include only top soils, no noticeable effect to topography or increase in landslide potential would occur." As described in Chapter 3, Section 3.2.2, of this EIS, soils in Area IV and the NBZ are typically less than 5-feet thick although soils depths can reach 20 feet in some areas. There would likely be little remaining soil to recontour excavated areas if full cleanup to the 2010 AOC LUT values were performed.

DOE's 75 percent estimate for the backfill volume assumes that some recontouring can occur as part of site restoration. The basis for the 75 percent backfill replacement assumption is professional judgment (Appendix D) based on the assumed removal of most of the soil down to the bedrock (little or no soil left to recontour) and the desire to recreate the contours of the current land surface to the extent possible such that the current storm water runoff patterns would be maintained and no large pits or depressions would be produced. Please also note that Boeing is the land owner, not DOE. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

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and gone, so the excuse that alternatives are rejected on this basis fails to have merit. Instead, these alternatives should be utilized to address problem areas which will continue to perpetuate beyond the scope of the cleanup time. Examples to be addressed include WS9a where a seep emerges averaging 1000 ppb of TCE from groundwater impacts resulting from the operational history of the site. This will continue whenever the water levels are high, as they are today after recent rains. This is a problem that will continue for decades, and solutions should be considered that are commensurate with such a long-term problem that impacts the headwaters to the LA River.²

S.8 Public Involvement

It is agreed that public involvement is a critical element in the cleanup and closure of SSFL. However, so much political effort to deflect responsibility has been made by responsible parties, including the use of surrogates to infiltrate community with false choices, denial claims, and harmful disparaging of community voices asking for cleanup. This is a failure by DOE, who has been repeatedly asked to clarify false information disseminated by surrogates such as DOE funded SSFL CAG. It is recommended that "community concerns" be referenced instead of ignored during these decisions. Those of use who spent time (years), digging deep into the data required to provide credible comments to this complicated effort that is not deeply understood by the community because of decades of secrecy. This has allowed for theories to take priority over facts, and it is our sincere hope that DOE will take responsibility for the accidents that took place [supported by thousands of documents] instead of deflecting with denial stories and surrogates used to provide *alternative-facts* to the communities affected. This has been extremely damaging to the trust level and can only be restored through responsible and responsive transparency.

Figure S-3 EIS Public Involvement Opportunities

While it is appreciated that the structure and facilitation of these meetings has been effective, the technical contents has been lacking and seems to always support minimization of the impacts of the toxic material that is supposed to be central to the undertaking. After all, the entire process is centered around how to remediate the site, yet years have been dedicated to "look the other way" tactics that include no use of chemical or radiological contaminant names, over utilization of acronyms which despite having a table provided, makes for an audience that just glazes over because the conversation is designed ONLY for those in the know, and makes those not in the know, think they are not capable of understanding the issues. As a public communication professional, these tactics are familiar from political campaigns but should not be used on a topic surrounding public health.

As a participant of the "Community Alternatives Development Workshops" held in 2012, I would have hoped that our efforts would have been considered more thoroughly. More effort should be made to provide the public with the information about why the cleanup should take place instead of focusing mostly on why it should not. The

² Pollution existing elsewhere is not an excuse for allowing pollution to persist at Boeing's Santa Susana Field Laboratory. The pockets are clear and responsibility is clear, so every technological alternative should be considered.

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- 63-10** The map the commenter refers to with the "purple" (Figure S-4 of the Draft EIS, in the Final EIS this area is represented by the tan and purple areas in Figure S-4) illustrates areas where at least one chemical exceeds a LUT value. As described in Section 2.5, "Toxicity of Soil Contaminants" of this CRD, exceeding a background value does not necessarily mean that the constituent is present at dangerous levels. Companion map Figures S-7 and S-8 illustrates in tan where the soil contaminants that potentially pose a risk occur.
- 63-11** The California anti-degradation policy does not preclude the consideration of natural attenuation for the contaminants demonstrated to degrade in a timely manner. Regarding the remainder of the comment, the scope of this EIS is limited to cleanup of DOE's portions of SSFL Area IV and the NBZ. Groundwater contaminants in Area IV remain within the boundaries of SSFL and are not present in off-site springs or seeps. The issues presented in the comment are related to NASA and Boeing's activities in Areas I and II, not DOE's activities in Area IV. Well WS9a is in Area II, not south of Area IV, and monitors a NASA groundwater plume. Boeing and NASA cleanup activities are only considered in this DOE EIS as part of cumulative impacts (see Chapter 5 of this EIS). Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities are being evaluated by DTSC in a Program Environmental Impact Report under the California Environmental Quality Act. DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in September 2017 (DTSC 2017b).
- 63-12** It is DOE's position that the EIS provides sufficient information to inform readers of the nature and scope of the remaining cleanup of Area IV and the NBZ. DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap, and the SSFL CAG. Each of these groups shares information and their views regarding SSFL cleanup with the public.
- 63-13** This EIS properly identifies its purpose and need. The levy of any penalties for lapsed deadlines is not an environmental issue and, therefore, was not considered in this EIS. The levy of any penalties, along with the potential environmental impacts presented in this EIS, public input, cost, and policy factors, will be considered by the decision-maker in selecting alternatives for soil remediation, building demolition, and groundwater remediation for implementation. The Record of Decision (ROD[s]) will present DOE's decisions regarding cleanup and describe the factors considered in making those decisions.

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public incorrectly has the understanding that the contamination is somehow sealed beneath the earth's crust and this is no accident. This comes from years of "moon-scaping the public."³

S.10 Alternatives

Developing alternatives for building demolition when years of excuses claiming that sampling data could not be gathered because of the buildings, is inappropriate and disingenuous.

One of the key failures to the LUT process as undertaken by U.S. EPA to comply with the AOC and Agreements in Principle, was that a primary flaw in the process described throughout the sampling investigative process was about how to address "near background" areas where error rates might potentially cause the removal of clean soil despite the purpose of only removing contaminated soil. For this reason, "near background" decision-making processes were needed as described by Mr. Gregg Dempsey of U.S. EPA. All agreed that this was a priority and this was articulated throughout every step of this process, and here we are in the EIS stage and ZERO attention to how to best address these areas has been developed or communicated. This is a primary failure of this document.

It is recommended for the final draft of the EIS, that a decision making process be well defined and communicated in a clear decision-tree format so that unnecessary soil removal is not done in areas where alternative solutions would be more appropriate. All those studies should be applied to these areas which are well defined. Additionally, soil thickness is a key factor to soil volume and has not adequately been shared with the public and instead has relied on inaccurate assumptions to create truck and traffic estimates that are extremely over estimated.

S.10.1 Alternatives Development

Alternative concepts developed and dismissed on the basis that they would not provide a solution in time for the deadline, should be reconsidered. At the very least, since the undertaking is not taking place until long after the deadline has occurred, this is an inappropriate reason for failing to solve the problem by not solving the problem.

S.10.1.1 Applicable Laws, Regulations, Orders, and Agreements

The AOC requires that other environmental regulations such as the Endangered Species Act, National Historic Preservation Act, as well as safety regulations and can be adhered to through use of exceptions as defined in the EIS.⁴ It is requested that the native american sacred sites council developed by DOE be utilized to define the cultural exceptions and work with independent biology oversight to ensure that these exceptions are not used to protect concrete or otherwise impacted areas from operational history of the site, from being remediated. Making exceptions more credible, and implementable will improve the very low trust levels.

³ Moon-scaping — verb, to moonscape: To insinuate the cleanup will result in a moonscape i.e., all soil removed leaving a landscape resembling the moon. This is a false narrative that has been perpetuated by the responsible parties or polluters, as well as by their surrogates, and has resulted in such lacking trust that very few people believe either side of the issues.

⁴ Exceptions as defined on maps within EIS using green shading demonstrate an overreach that is unacceptable.

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63-14 DOE agrees with the commenter's recognition of the importance of considering decision error, possibly resulting in the removal of soil with less than background contamination, in identifying contamination, along with EPA's caution on this matter. This issue is discussed in Section 2.3.3 of the Final EIS. DTSC did not adequately consider the decision error issue when it selected the LUT values. This is why of the chemicals analyzed, 42 percent exceeded their respective AOC LUT values in at least one sample.

63-15 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

63-16 In addition to their role through NEPA as a cooperating agency on the EIS, the federally recognized Santa Ynez Band of Chumash Indians, through their role on the Sacred Sites Council and with the Indigenous Communities Representatives (tribal consulting parties), are playing a major role in developing the NHPA Section 106 Programmatic Agreement (i.e., an agreement being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC) that will specify procedures for managing cultural resources in Area IV and the NBZ during cleanup activities. DOE has consistently looked to the Sacred Sites Council and the Indigenous Communities Representatives (i.e., tribal consulting parties) for input prior to making decisions that could affect cultural resources.

63-17 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) DOE evaluated the potential for onsite/in situ remedies as part of the soil treatability studies (see Chapter 2, Section 2.3.2 of this Final EIS). However, the determination of those studies performed by the California Polytechnic State University, San Luis Obispo, and the University of California, Riverside (Nelson

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S.10.1.2 Process and Criteria

While community input has been a major driver, the lack of fact-based presentation to the public has been detrimental to the public understanding of the undertaking at hand.

Risk assumptions described in this section falsely presents a picture of evenly distributed impacts when in fact, the reality or "ground-truthing" is quite different. If we could believe that ALL of the contamination above a given level could be accurately remediated, it would be very different, but despite the portrayal of thousands of samples, because of the steep and extreme terrain and the history of spills, accidents, mishaps, fires, and partial meltdowns, we cannot possibly know where all of it is. Each sample only represents the soil contained in the sample, and with areas like the Old Conservation Yard where literally tens of thousands of barrels and containers were disposed of by tossing down the hill. We cannot assume anything, and that is why the extreme precaution of a more protective level is necessary. Instead, DOE and its' surrogates have continued to propel a narrative that points to a single event in July of 1959, which we can all theorize about all day long (decade in and decade out) with countless efforts to drill it down to a single testimony about 13 of 43 fuel rods. While very important, it cannot begin to compare to fifty years of operational history which included burning of waste for decades as a method of "removal." Additionally, the facts about radioactive waste being taken UP the hill from all across the country from other nuclear facilities for de-cladding and reprocessing and reuse. I was extremely disappointed to see the level of green shading being used to cover areas of clear contamination and serious operational and incident history. [attached]

Using LEED principals for a green cleanup should be a priority in every aspect of the process with the exception of radioactively contaminated metals, which should not be recycled.

It is recommended that responsible parties seek advice and direction on how to minimize impacts to the site, addressing the cleanup needs from the Stormwater Expert Panel assembled by Boeing and the Regional Water Quality Control Board to develop long-range ideas for stormwater management through multiple conditions from drought to high water retention levels as currently experienced, and to suggest treatment train systems that address seep areas that emerge with contaminant impacts.

The process described in the EIS is not consistent with the process described to the public during the public comment period, where balancing discussions were limited to trucks, traffic, unnecessary trucks and traffic, and maps that leave the impression that the entirety of Area IV was being removed. The cost benefit analysis, while important, has been elevated and misused in this case.

S.10.1.3 Alternative Concepts Considered but Dismissed from Detailed Study

As recommended under NEPA regulations under 11502.14, "includes all reasonable alternatives" where in situ approaches which may be effective, eliminate truck/traffic impact or greatly reduce it, should be employed where possible/feasible.

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2015a, 2015b, 2015c; Matsumoto and Martin 2015) is that cleanup to the 2010 AOC LUT values using onsite remedies was not practical or not effective, with one exception. (The one potentially effective form of onsite remediation identified was the use of monitored natural attenuation for management of certain low-concentration, petroleum-contaminated [TPHs] soil.) Any detection of a chemical following *in-situ* treatment would render the treatment to not comply with the LUT values. Meaning that after treatment, the soil would need to be disposed of offsite anyway.

Regarding the commenters reference to WS9A, this seep is along the southern boundary of SSFL below Areas II and III. There is nothing that indicates that this seep is impacted by materials originating in Area IV and it is, therefore, not within the scope of remediation addressed by DOE in this EIS.

63-18 DOE's goal is to provide a transparent process working towards the cleanup of Area IV and the NBZ. DOE acknowledges your concerns.

63-19 DOE recognizes the alternatives analysis is a difficult topic for many in the community and that the terminology used in a discussion of contamination is of necessity complex. But, DOE has reached out to provide ample public involvement opportunities and information to inform the public. Public involvement for this Final EIS has included opportunities such as the Community Alternatives Development Workshop, the Groundwater University, and the Treatability Studies public involvement. Additional public involvement activities are described in Chapter 1, Section 1.10, of this EIS. DOE has not spent "years ... dedicated to 'look the other way' tactics." DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). (Please see Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD.)

63-20 Please refer to the response to comment 63-3.

63-21 DOE used the GIS (geographic information system) database for Area IV and the NBZ to identify on a point-by-point basis, any sample location that had an exceedance of an LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, identify the surface area

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S.10.2.1 Soil No Action Alternative

This portion of the report should focus more on describing the potential impacts associated with leaving the site without cleanup. Instead it is only described as a money-saver. What about the people who then don't get protected ever? What is the cost associated with that?

S.10.2.2 Cleanup to AOC Look-Up Table Values Alternative

The biggest risk to this alternative is accidentally removing clean soil and potentially replacing clean soil with other clean soil. It is recommended that a better decision process be developed with public comment to make these difficult decisions and remain protective of human health and the environment.

Table S—3 Preliminary Estimated Soil Volumes for Transportation

This table fails to identify the volume of "near background" soils, which was described as of primary importance throughout the investigative process. There should be no difference between "above health risk" and "hazardous waste" for the purpose of making cleanup decisions.

Additionally, not enough consideration has been given to methods to reduce soil volumes, in situ treatment processes, etc. which were incorrectly dismissed on the basis of not being timely enough to meet the 2017 deadline. Since we've already missed the deadline without even starting, it is inappropriate to use this as an excuse to not do the job. Penalty assessment is in place for the purpose of motivating the polluter to stop polluting and engage in needed cleanup. By ignoring timelines, and failing to collect on these failures, there is no incentive for the richest company world and the federal government to do a better job. Compliance to the AOC as written, with full use of exceptions is the only credible way forward from here.

S.10.2.3 Additional Soil Remediation Action Alternatives

It is inappropriate to include additional action alternatives outside of the mandated no-action alternative to be measured for comparison only as "if we don't do this, what will the impacts be?" Outside of the required alternative, and data presentation to the public should instead be focused on cleanup approaches, remediation, effort to minimize replacement soil through recontouring techniques as employed across the Boeing and NASA portions of the site as demonstrated in recent demolition and removal projects such as the ISRA in both Outfall 8 and 9 areas.

The Conservation of Natural Resources alternative recommends "area averaging" to reduce cleanup. The effort to modify the cleanup, by averaging or excusing away higher concentrated areas by averaging them with non-detects or lower concentrated areas should not be allowed under any circumstances when so much remains unknown just based on the published incident report that shows barrels that were discovered burning, etc.

Figure S—4 Extent of Radiological and Chemical Constituents Above AOC Look-Up Table Values

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for the exceedances and depth of exceedances using sample results at multiple depths for soil collected at the sample locations, and then calculate soil volumes exceeding the LUT values. The sample volume development process was independently reviewed by remediation engineers and the volumes were validated (CDM Smith 2017).

63-22 DOE reviewed the alternative concepts proposed and dismissed from detailed analysis in Chapter 2, Section 2.2.3 of this Final EIS (same as the Summary, Section S.10.1).

The only alternative dismissed solely because it did not meet the 2017 date, was the cleanup by 2017 per the 2010 AOC. Other alternatives in which timeliness was mentioned as an issue also suffered from other problems that excluded them from detailed analysis. For example, soil washing was mentioned as having a long time horizon, but it also was noted that it was uncertain whether it would be effective in meeting the 2010 AOC LUT values and that the resulting soil would be sterile because of the chemicals that would have to be used to remove contaminants, requiring adding soil amendments that would exceed LUT requirements. For these reasons soil washing was determined to be impractical for in situ soil remediation.

63-23 As discussed in Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD DOE is working with the appropriate agencies and organizations to define the exemption areas. Under all of the alternatives considered by DOE, locations with concentrations of chemical or radioactive constituents that pose a threat to human health or the environment would be cleaned up. This alternative includes locations within exemption areas.

63-24 The commenter is incorrect in the statement that the risk assessment figure indicates an even distribution of chemicals across the site. Figure 2-5 illustrate just the opposite, localized areas of contamination. The "green areas" referenced in the comment represent habitat for sensitive plant and animal species. Within these areas soil remediation will be performed, but in accordance with procedures worked out with USFWS and California DFW that will protect the sensitive resources (see CRD Section 2.4, "Application of Exemptions under the 2010 Administrative Order of Consent.") The soil sampling investigations conducted by EPA and DOE were based on multiple detailed reviews of site reports, records, data files and assessment of activities including using historical aerial photographs. All areas identified during these reviews and drainages leading from operational areas have been sampled. Based on EPA's work and the more than 10,000 samples collected, DOE is confident that the results indicate where the remaining contamination exists in Area IV. Finally, as indicated by EPA, its investigation efforts represented, "one of the most comprehensive technical investigations ever undertaken for low-level radioactive contamination" (EPA 2012).

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This map indicates that all roads will require removal, whereas the other alternatives described as more "environmentally friendly" do not require industrial infrastructure to be removed. This indicates that this is a potential tactic to increase "soil and debris" volume estimates. The roads are NOT the problem.

Figure S-5 Extent of Radiological and Chemical Constituents Above AOC Look-Up Table Values with proposed biological and culture exemption areas

I fully support biological and cultural exemption areas but feel that the areas shown in maps in EIS are a drastic overreach of this process, exaggerating these areas to include concrete facility areas which are certainly disturbed. In one instance, even the partially tarped SRE Complex is partially excluded from cleanup despite the debris discovered using magnetometer analysis during ARRA Survey. This is inappropriate and should be revised to be more reasonable, defensible, and allow for reasonable debate of issues. Without a credible effort in outlining these areas more accurately, the entire bright-line process is put at risk, and seen as unreasonable.

Figure S-3 Preliminary Estimated Soil Volumes for Transportation [S-24]

Assumption of 75% replacement factor for soils removed is erroneous at best. During most recent site visit to see the ISRA completion of Outfall 8 and Happy Valley portion of Area 1, we were told that ZERO replacement soils were needed and instead they simply re-contoured. Considering the very thin soil profile in Area IV. If there isn't more than 12-18 inches of soil, and in many areas, there is zero where rock outcroppings are visible. With the exceptions of areas like the Building 56 landfill, or the SRE or KEWB or Hot Lab profiles where contamination is at higher concentrations and at depth (4024 and RMHF as well). Please provide basis for the 75% assumption since most actions which have taken place have required very little replacement soil. Please collaborate about solutions with Boeing who has been able to complete ISRA removals without the need of replacement soils and use similar techniques to achieve proper contouring of the property to manage stormwater drainages and include passive "wear the water out" treatment trains to store and allow percolation of surface water to increase bank storage and decrease erosion and surface water quality violations moving forward. This should be treated like it will be here forever, to accommodate all levels of drought and storm-events.

Evaluation of Implementation of 2010 AOC Cleanup Requirements

While there are real challenges to the very low detection limits and caution should be used when defining the GRAYS in the process, which was carefully done with EPA. The effort as described here, makes it seem impossible to get the detection right. Lab requirements was a challenge with EPA and it is therefore recommended that DOE seek assistance from US EPA to achieve similarly defined detection limits and error rates as achieved during ARRA investigation.

Changes in Site Knowledge Since the Signing of the 2010 AOC

This section simply regurgitates the claim that it's too hard, while being less contaminated by the primary concern of radionuclides. If this is the case, why do several of the alternatives suggest leaving behind areas where known radionuclides are present? The statement, "Approximately 70 percent of soil samples of radionuclide concentrations greater than the FALS [field action levels] are located within five Area IV Radiological Areas of Interest: RMHF complex, SRE complex, 17th Street Drainage, Former Fuel Element Storage Facility, and New

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Please refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for a discussion of past cleanup and the current status of Area IV.

63-25 DOE is committed to minimizing the impacts of cleanup of Area IV and the NBZ by using the principles of "green cleanup." To the extent practical, green and sustainable remediation and innovative technology practices will be integrated into all aspects of remediation. The text box in Chapter 2, Section 2.2.2, of the EIS summarizes the green principles that will guide DOE's clean up decisions. Chapter 7 provides a more detailed discussion, which notes that recycling will be considered as part of the contractors' scopes of work for site remediation. Only materials demonstrated to be free of radioactive or chemical contamination and using approved methods and criteria may be released for recycling.

63-26 DOE has added information in Chapter 4, Section 4.3.1, of this EIS regarding the Stormwater Pollution Prevention Plan (SWPPP) that will be developed for soil remediation actions. The SWPPP will incorporate all appropriate runoff control measures recommended by the Stormwater Expert Panel. This EIS has also been revised to note that the SWPPP will detail the potential configuration and design of the additional erosion control measures required by Mitigation Measure SW-2 to respond to any runoff from the site that exceeds the design capacity of the best management practices and NPDES monitoring locations identified in Section 4.3.1 along with the avoidance measures required by Mitigation Measure SW-1.

63-27 Although there is a range in the potential human health impacts, as stated during the DOE presentation at the public hearings, all of the action alternatives evaluated in the EIS are protective of human health. This is illustrated in the text box in Chapter 2, Section 2.4.4 and in Chapter 4, Section 4.9, and Appendices G and K of the Final EIS. Key differences among soil remediation alternatives are the area to be excavated and the corresponding volume of soil that would be removed. Figures 2-3, 2-5, 2-6, and 2-7 show the differences in areas to be excavated under each of the soil remediation alternatives. The difference in soil volume removed drives the duration of the project and many of the impacts (e.g., truck trips, air emissions, water use) and, therefore, was highlighted in the public hearing material.

63-28 Please see the responses to comments 63-2 and 63-17.

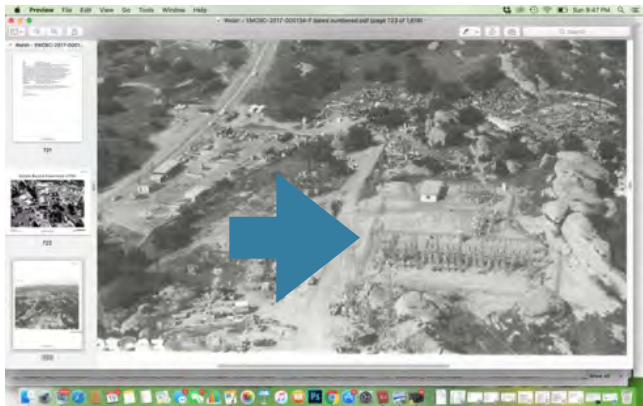
63-29 There is no technical definition for what "near background" means. Therefore, there is no means of calculating such a volume. According to the AOC, soil is either at or above background. Therefore, a volume above background can be calculated. Using risk

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Conservation Yard Drainage, [OCY]" claiming that the majority of the contamination is limited to each of these areas.

[PHOTOGRAPH of OCY]



This area where the power grid is located is shaded green as if to be a cultural or biological exception. It is these over-reaching efforts in areas which were so deeply out of control during operation that are critical to accurately assess and sample with the highest level of scrutiny.

While the results from the EPA Radiological Survey and Background Study found that many of the areas were less radioactively contaminated than previously thought, this entire process has been used to "dumb down" the audience or community by providing less and less of the necessary context for the public to have any chance of comprehending the current conditions of the site. The public has been further "dumbed down" by the misinformation campaign conducted by DOE funded SSFL CAG who has exaggerated even the DOE exaggerated numbers to be intolerable in the way of trucks and traffic while nearly completely dismissing the need to remove deadly contamination that is harmful to human health and the environment.

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assessment, a volume of soil posing a risk can be calculated for comparison purposes. However, without "near background criteria", such a volume cannot be calculated. The "above health risk" can be an important differentiator in determining the quantity of soil to be removed and above "hazardous waste" is an important differentiator as to how the soil would be handled and disposed. Soil containing contaminants above hazardous waste limits has handling and disposal requirements that are different from soil containing contaminants but below hazardous waste standards.

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC, using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for more information). In response to public input received, and consistent with its obligations under NEPA, DOE also analyzes alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ. Area averaging is not performed to "excuse away" higher concentrations as the commenter alleges. Prior to area averaging, areas with concentrations that would be a risk to human health and the environment are identified and targeted for cleanup. Area averaging would then be applied to the remaining soil to determine whether additional soil cleanup would be needed.

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DOE identified the minimization of the amount of soil for disposal through purposeful excavation of only those areas characterized as requiring removal and the use of uncontaminated soil for fill or other purposes, such as erosion control and excavation backfill as minimization measures (see Chapter 6, Table 6-1). However, meeting the criteria of the Cleanup to AOC LUT Values Alternative would involve removing most of the soil down to bedrock over a large part of Area IV. Even with the use of minimization measures, this disruption of the natural contours of the area would require backfill from an offsite source.

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If 70% of soil samples with radionuclide concentrations greater than the FALs are located within five Area IV Radiological Areas of Interest, why are some of these primary areas of interest being recommended for "no action" through green shading exemptions? It is recommended that this be corrected and these primary areas be addressed using the highest level of protection as intended by the spirit of the AOC signing, which was to acknowledge the purpose of SB990, which was to bring about cleanup instead of more decades of delay. Yet here we are, a decade later, still wondering if cleanup will even take place.

The AOC LUT map suggests that all roads be removed as if they are the problem. This level of exaggeration and overreach makes achieving a credible cleanup that has any level of community buy-in incredibly difficult.

Range of Alternatives

This is defined as to include a range of all reasonable alternatives, yet no suggestion of mitigating the leaving behind of toxic material is suggested in any of the alternatives. The one thing we can be certain of, is that time will reveal new 'old' impacts which emerge due to erosion, rain, or surface water flow, or future brush fires which have historically occurred on a somewhat regular basis and should be expected to continue at similar levels. These mechanisms of unexpected release are known, have happened before, and should be expected to happen again and should therefore be planned for. The culvert modification work done by Boeing in the ISRA work directed by the Stormwater Expert Panel has forever REDUCED risk for the areas down-gradient from those areas and we are eternally grateful for that. It is my hope that similar effort be applied to all drainages exiting the site from Area IV and Northern Buffer Zones. Designing the future to manage water using a combination of natural and filtration systems is wise, and far less expensive than waiting for more impacts to be seen or suspected. Plans for implementation of long term management of all drainages [especially those leaving the Area IV burn pit and OCY areas] should be incorporated in the mitigation plan. All areas of exemption should also require down-gradient plans for water management so that the problem we protect for, doesn't become a bigger problem. This cannot be accomplished if the constant tone in every meeting is the exaggeration of trucks, amplification of potential traffic increases and little time devoted to actually addressing how to live safely next door to a nuclear mess.

"Nothing to see here" has been a multi-decade opposition campaign which has damaged the public understanding of the site and is truly a disservice to the communities who have already taken it on the chin in environmental impacts. While we cannot prove the cancer connection, it is widely known that these radionuclides and chemicals are carcinogenic and we also know that they left the site at various levels for decades. The inability to draw a direct line to any particular cancer should not be used as a constant reason to close our eyes to the obvious. We need you to try to get this right, instead of trying to not comprehend the problem because then we have no hope of getting this right.

Potential Environmental Consequences of Cleanup to AOC LUT Values

If we are going to list 62,500 round trips of cars or light-duty trucks primarily due to worker commutes, the number of high-paying jobs created should also be listed. 62,500 / 10 years = 6,250 roundtrip car trips per year / (5/7th or

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63-31 Within Area IV, about 10,000 feet (less than 2 miles) of paved road remains. As stated in the Final EIS Section 2.5.2, DOE does not plan to remove any road as part of the soil removal actions. An exception may be made for roads where soil contamination has been shown to extend below a road. Many of the roadways would be necessary to support groundwater remediation and to maintain the storm water control features. Inclusion of the roadways on the figure was not intended to imply that they would be removed. The set of figures the commenter references (and corresponding figures in Chapter 2) have been revised to consistently display features of the site for this Final EIS.

63-32 Please refer to the response to comment 63-1. Inclusion in a green-shaded proposed exemption area does not mean "no action" as indicated in the comment. Disturbed and undisturbed areas within proposed exemption areas would be thoroughly investigated and chemicals or radionuclides exceeding risk-based criteria to protect human health and would be subject to focused removal actions in accordance with the procedures worked out with USFWS and California DFW (see CRD Section 2.4, "Application of Exemptions under the 2010 Administrative Order of Consent").

63-33 Please refer to the response to comments 63-1 and 63-32. The power grid (electrical substation) referenced in this comment is another site in which the developed portion of the site is immediately adjacent to sandstone outcrops supporting the Santa Susana tarplant, other sensitive species, and possibly cultural resources. The maps in this EIS are at a small scale and are not intended to show the detail (i.e., the precise boundaries) that would go into the final remediation planning. These areas will be considered during preparation of detailed remediation plans, which would include a point-by-point analysis and site-specific plans for remediation using risk-based criteria to protect human health and careful remediation approaches to minimize unnecessary damage to sensitive species or cultural resources.

63-34 Chapter 3 describes the affected environment in and around SSFL Area IV and the NBZ. Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE does not control information distributed by those it has funded, including not only the CAG, but also the SSFL Advisory Board, SSFL Work Group, Committee to Bridge the Gap, Physicians for Social Responsibility, Rocketdyne Cleanup Coalition, and Teens against Toxins. The EIS is written to provide more detailed information for those who would like to delve into the details of the analysis. The summary provides an overview of the entire EIS analysis; those who would like more detail are referred to the body of the EIS; and finally the appendices are provided to allow an even more in-depth review of the analysis.

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0.71428 * 365 workdays per year to 260.71. 6250 / 260.71 = 23.97 * 10 = 239 jobs created over ten years in addition to truck driving jobs in the thousands.

Backfill estimates are again over-estimated when re-contouring which is primary utilized, is not being considered. The assumption of backfill should be reduced to no more than 20%.

The map indicating the AOC alternative indicates that all the roads in Area IV will be removed. That is miles and miles of asphalt, and there is no reason to make this assumption, especially given that the alternatives described as "environmental conservation" do not show this similar removal of roads as would be expected for use as an "open space wildlife corridor."

The estimation of 70,000 truckloads does not include the subtraction of green shaded "exemption areas" which appear to cover nearly 40% of the site. This was confirmed by John Wondelleck who gave the reason that the areas have not been finalized, so they have not been included. While this is true, it is known that there are cultural and biological areas that are clearly identified and therefore some estimate must be included in the EIS as the AOC requires BOTH background, AND the exemptions to be met. While I believe these areas are exaggerated, they can clearly and easily be corrected through use of overlay and current mapping from Google Earth. [attached samples]

Background Data AOC LUT Failures

This is false. I was part of every step of the background study with US EPA as well as the chemical background study with URS. We did a distance test location study looking in FOUR directions, I walked each one of them and was involved in the sampling, and that result came back before we all started with the background location sampling process. If on a chemical process, which they did not share with us despite attending the test locations I describe above. The LUT values were supposed to be defined by the test location sampling, so the statement that the AOC's would cause each of them to fail is false. Sampling was taken at each of the locations, in fact, we lost Rocky Peak because of the brush fire that occurred between the selection and sampling time-frame. With DTSC for chemicals they used different locations than EPA, but the development of the data set for chemical AOC LUT values would be developed from the sampling from these locations, so by virtue of the process as described to all of use who participated every step of the way, it is not possible for 46 of 110 chemicals to exceed their value if the value was developed from the sampling in the background study. Please provide a detailed explanation of this effort to discount chemical LUT values as legitimate. By design, they should be driven from the background data, and therefore cannot exceed itself by so much. I hereby request an audit of the chemical background process, data used, and decision points that is explained in depth to the public.

Health Risk

The most glaring false statement or assumption that I have come across so far, in reviewing the draft EIS:

Table 2—10 Summary of Potential Cumulative Impacts Page 2-422:

Cancer risks are thought to have a latency period, and certainly can vary with concentration of contaminant impacts. The argument made in Table 2—10 suggests that cancer risks are realized on an instantaneous basis. Since the health risk potentials are described based on amount of time per day that might be spent at the site by

63-35 DOE has added information to the EIS in Chapter 4, Section 4.3.1 regarding the Stormwater Pollution Prevention Plan (SWPPP) that will be developed for soil remediation actions. The SWPPP will incorporate all appropriate runoff control measures recommended by the Stormwater Expert Panel.

In addition, as required by 10 CFR 1021.331, following completion of the ROD(s) for this Final EIS, DOE would prepare a Mitigation Action Plan that addresses mitigation commitments expressed in the ROD(s), including those that are necessary to prevent movement of contaminants during soil remediation. The Mitigation Action Plan will explain how the corresponding mitigation measures are designed to diminish adverse environmental impacts associated with the course of action directed by the ROD(s) and will be planned and implemented. Also, as described in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD, DOE has also removed much of the contamination within the soil, bedrock, and remaining buildings that resulted from nuclear research activities at Area IV.

63-36 Consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research, DOE is committed to remediating Area IV and the NBZ. This EIS has proposed alternatives for cleanup, and it evaluates the potential impacts for each alternative. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD, for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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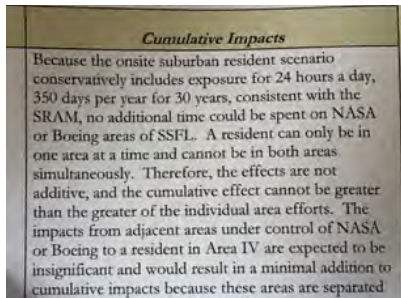
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comparing potential receptors from the recreator to the potential resident, it is not reasonable to limit potential impacts felt by the cumulative exposures based on time spent in each of the areas as well as the radiant impacts felt in one area from another.⁵ In this same EIS, is a potential alternative for leaving the RMHF without remediating it or removing it. In the conservation alternative, it isn't even marked in blue to indicate radiological, or to even exist. These inaccurate errors that exist throughout the map shading of areas of cleanup and exemption reduce the credibility of the entire report. (This is almost as bad as the double counting claim used to deflect responsibility on water quality violations). By the logic used in the responsible party's own SRAM documents claiming the "shine from Building 4021 and 4022, if I am standing in Area III over a spill of benzene, am I not exposed both to the benzene I am standing on AS WELL AS the radiation "shine" coming from the RMHF as articulated in the HSA Incident Report. [Appendix B, HSA,]⁶

It is also inappropriate to reference as assumption of 24/7 exposure as "conservative." Can there be anything more than 24/7 exposure?

⁵ Appendix B Historical Site Assessment Summary Page 5 of 18, building 4793 Historical use impacting COCs includes a statement: "Background is relatively high (40µR/hr and 8,000 cts/min due to the shine from nearby buildings 21 and 22. This suggests that 4793 was impacted by nearby buildings containing high levels of radiation. If buildings were impacted according to the USEPA ARRA RAD SURVEY, it is reasonable that impacts would also be felt by people spending hours each day at the site. If the presence of radioactive contamination measured is blamed on nearby facilities to explain away the high readings, then it must be also considered to be radiating and affecting other nearby areas, habitats and potentially, nearby residents

⁶ Numerous building facilities on the incident report explain away the contamination present as "shine from RMHF" which demonstrates the impact to surrounding areas.

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63-37 As described in Chapter 4, Section 4.12, of the EIS under any alternative or any combination of action alternatives, site activities would have a minor beneficial impact on the economy in Los Angeles and Ventura Counties, by providing employment and increasing sales for industries that provide equipment, supplies, and rentals.

63-38 To clarify what was included in the Draft EIS: the estimated soil volumes (and therefore, number of trucks) were based on the remediation of areas outside the exemption areas. This is indicated in Chapter 2, Table 2-3, of this EIS which shows that the estimated soil volume that exceeds the 2010 AOC LUT values (1.6 million cubic yards), would be reduced by 115,000 cubic yards to adjust for land that is included within the proposed exemption areas. For each soil remediation alternative, the estimated soil volume and corresponding number of truck trips presented in the Draft and Final EIS (see Tables 2-5 and 2-6) take into account proposed biological and cultural exemption areas.

As previously noted, carefully planned, focused cleanup within the exemption areas would be performed to remove soil with constituent concentrations that pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs). Therefore, additional soil volume and a small number of additional truck trips are expected as a result of these removal activities.

63-39 As described in Chapter 5, Section 5.5.9, and summarized in Chapter 2, Section 2.8.2, of this EIS, the incidence of cancer does have a latency period. However, the probability of incidence of cancer (at some point in the future) is a function of both exposure rate and exposure time. The residential risks for Area IV were calculated assuming the exposure was for 24 hours per day, 350 days per year, for 30 years. The 350 days per year assumes the resident is traveling away from home 2 weeks per year, and the 30 years assumes the resident will live on the same property for 30 years. That assumption does not leave any time for exposure to an adjacent property. Although the recreational user's time allocation is not nearly as much, the assumed exposure time of 8 hours a day, 75 days per year, for 30 years for recreational activities (e.g., hiking) is sufficient to assume additional recreational time on other properties is not available. Therefore, any time spent on adjacent property subtracts from the time available on the Area IV property.

The 40 microrentgen per hour (µR/hr) mentioned in the Final Historical Site Assessment (HSA) (HGL 2012a) for Building 4793 is only "relatively high" relative to natural background radiation levels, which are typically 6 to 8 µR/hr. Building 4793 was located much closer to the RMHF than Area III is. Radiant impacts diminish by the

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Additionally, one of the cumulative impacts of these storage areas which have stood, for many years with expired waste still in place despite requirements of these limitations, so that "exposure" time should also be measured as a negative impact that we have already undergone and will continue under scenarios where many of these undocumented areas will remain a hazard forever.⁷

Appendix D

D-3 Table D-1 DOE Buildings in Santa Susana Field Laboratory Area IV to be removed.

Noted on this list is building 4563 and is noted "not considered a radioactively contaminated structure." This is false and should be corrected. While it might be true that it is not a structure, because it is a storage yard area without walls, but contained yellow birdcage and cask containers. This is an area that has a long history of spills which is why the pavement has been repaired and re-slurried so many times as a mechanism to 'contain contamination' according to interviewed workers. [ACME/Cleanprocketyne 2006 Worker Interviews]

This is also true for 4688 where I photographed barrels marked as radioactive, draining upside-down into pallet cartons. Also, not a building, but the pavement has been slurried over and over and over to contain the radiation. This is reflective in the map indications in blue when overlaid [example overlay, Walsh 2017]

While the designation for 4024 indicates that it is radioactively contaminated [appropriate], but the driveway/loading area which contains deep BGS tanks is partially shaded in green as an exemption. This is inappropriate and should be corrected for final draft.

Figure D-1 Remaining structures shows building 4100, but it is not identified with a number on the photograph, nor is it listed even though it remains at the site. Please correct and provide details as this was the location of the largest tomography machine in the world.

Figure D-2 Radioactive Materials Handling Facility Overview

This figure does not identify the holdup tank area below, which used to be an unlined pond and should be included, as well as remediated according to sampling results and should not be eligible for exemption as the pond was tarped as recently as last year.

Facility areas noted in Appendix D do not seem to include the OCY and NCY areas which are important storage areas, in part because of the steep topography, and the number of years of lack of controlled storage of thousands of containers and debris. Instead, this area is not noted with any relevant detail and shaded largely in green. This is inappropriate and should be corrected.

⁷ Building 56 Landfill consist of unknown debris, is very steep, and acknowledged as a problem area eventually justifying the placement of "outfall 7" to measure this discharge. The Landfill Excavation is a 50 foot deep hole that was never used as a reactor facility because it hit groundwater (like 4024 and so many other deep subterranean facilities). This area is not a biological or cultural resource, and in fact, stands as a hazard, and is therefore fenced including barbed wire. For this reason it can also not be considered habitat, and because the bottom was found to contain debris, as well as the ramp area, this area should not be excluded under biological or cultural exemption unless cultural importance can be demonstrated.

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square of the distance. The radiant sources in Area IV are not close enough to other areas (e.g., Area III) to give a significant radiant impact in any other area of SSFL. As noted in Chapter 4, Section 4.9.3, of this EIS while the buildings remain standing, only individuals who enter the buildings or stand on a contaminated paved surface are expected to receive a radiation dose. Doses could come from direct external exposure to radioactive material within the buildings or from the outside paved surfaces.

As stated in Chapter 1, Section 1.1, of this EIS, DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. To this end, DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. This EIS considers three action alternatives to accomplish these tasks and, no areas will be subject to DOE remediation activities forever.

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Under the ecological and cultural resource exemption process, locations where contamination exceeds human health or ecological risk-based levels would be cleaned up. Through formal and informal consultation with the State Historic Preservation Officer, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes, DOE has also identified areas in which it proposes to apply the exemption process for protection of cultural resources. See Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a description of the exemption process.

The Building 56 excavation was included as part of a proposed exemption area because it supports wetland vegetation and habitat as discussed in Appendix I, "Wetlands Assessment," of this EIS. At this time, the wetland represents the only permanent surface water on Area IV or the NBZ and it supports plant species (e.g., willows, cattails) and may support such wildlife as amphibians and reptiles that require access to surface water. As such, if it is found to have chemicals or radionuclides exceeding human health RBSLs or ecological risk levels, these areas would be subject to focused removal activities. The area does represent a safety hazard due to the nearly sheer walls of the excavation and would need to remain fenced in the future if it is not filled in.

63-41

Waste determined to be LLW from the buildings within RMHF and Building 4024 would be managed and disposed of off site as radioactive waste. In this EIS, waste determined to be LLW from other buildings that have a radioactive history was also assumed to be disposed of as radioactive. Debris from the demolition of these

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Table D—5 Comparison to other Cleanup Projects in California

These comparisons are inappropriate to both Hunter's Point and McClellan AFB because of the military nature of both projects, as well as the topographical location (not at the top of a hill surrounded by communities). Additionally, they did not have operating burn pits that burned waste for decades so the air dispersion impacts will be very different. Finally, the future use of Santa Susana Field Laboratory is not known, coupled with steep drainages and operational history of releases, that a more protective level is needed. TCE is one of the primary drivers for contamination at Santa Susana Field Laboratory and is not present at McClellan AFB, further drawing contrast between these projects.

Summary, continued.

S—25 Evaluation of Implementation of 2010 AOC Cleanup Requirements

This section suggests that AOC background is more stringent than other cleanups, but contains exemptions to address these differences, and was agreed to as a settlement by DOE. It is important that it be articulated clearly that the approach of this cleanup based on a "bright line" strategy is to cleanup all that is detectible, or above background, except for areas that require protection for X⁹ reasons. Under this scenario, the areas that are undisturbed natural open space that contains these features can be protected. For these exceptions, mitigation should be recommended as to how to address the safety requirement for contaminants that remain to sequester the area through use of phyto-remediation techniques or institutional controls that are approved by the regulator with public oversight. In other words, for everything that is suggested to be "left behind" recommendations must be made to mitigate that change. This will create long-term solutions to make down-gradient communities safer both tomorrow and in future generations who will have less available knowledge about the details of what was done here. We need to be willing to create a solution that protects people we will never meet and nature we will never see. That is the only way to make this responsible, trustworthy, and with potential for a real future that protects both the past history and future community residents surrounding the site.

S—28 NEPA Guidance and Regulations for Addressing Alternatives in EIS Documents

"Rigorously explore and objectively evaluate all reasonable alternatives..." has not been followed as all alternatives that included in situ solutions have been dismissed despite being a primary directive of the AOC to use all reasonable methods to reduce soil volumes leaving the site.

S—29 Potential Environmental Consequences of Cleanup to AOC LUT Values

130 acres of land disturbance noted in EIS does not deduct the proposed green shaded exception areas, or the areas that are previously disturbed, paved, former slabs and infrastructure that has been altered from its natural state. These areas are significant and should be deducted from this number for a more accurate picture to the public. Similarly, the soil estimates seem to be based on assumptions of a much deeper soil profile than what is

⁹ X - Exceptions for biological, endangered species and designated cultural site preservation.

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buildings would be surveyed to ensure it is disposed of properly. While waste only from Buildings 4038, 4057, 4462, and 4463 is not assumed to be radioactive, these buildings would be surveyed for the presence of radioactive material and disposed of appropriately after demolition.

Building 4100 is owned by Boeing and removal is the responsibility of Boeing. Figure D-1 was revised to indicate that numbered buildings are those for which DOE is responsible.

Any contaminated areas (e.g., RMHF holdup tank area, the Old and New Conservation Yards, and the areas associated with building 4024) would be remediated as part of the soil cleanup efforts, based on their characterization and the implemented cleanup levels. That means that even if they are within an exemption area, if they pose a threat to human health or the environment, they would be remediated. These areas will be considered during preparation of detailed remediation plans, which would include a point-by-point analysis and site-specific plans for remediation using risk-based criteria to protect human health and careful remediation approaches to minimize unnecessary damage to sensitive species or cultural resources.

DOE disagrees with the commenter. Hunter's Point in San Francisco and McClellan AFB are situated immediately next to much larger populations than SSFL. Both facilities have operations going back to World War II and earlier, and both had similar chemical practices as SSFL. The future land use of the Boeing portions of SSFL, including Area IV, will be open space. Hunter's Point and McClellan AFB are being redeveloped for other purposes. According to EPA's website, solvents are the primary volatile organic compound in groundwater at McClellan, with TCE mentioned as the volatile organic compound. More than 1.6 million pounds of volatile organic compounds have been removed from groundwater at McClellan. TCE is an issue for groundwater at SSFL, but primarily in Areas I and II. This EIS addresses alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

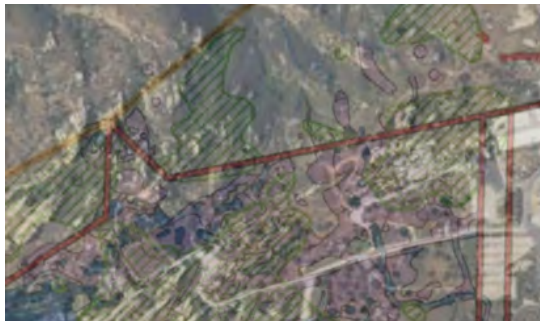
Please see the response to comment 63-1. Revegetation and soil stabilization after remediation as proposed in the EIS is critical in protecting watersheds from erosion and sedimentation. Management of surface water to ensure standards are met would be continued as well as groundwater monitoring in areas subject to monitored natural attenuation would provide further protections.

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actually present at Area IV of the Santa Susana Field Laboratory and should be corrected to the more accurate depictions as found in DOE soil and depth sampling.

Overlay showing number of facilities which are being "protected" through exemption showing SRE and OCY areas



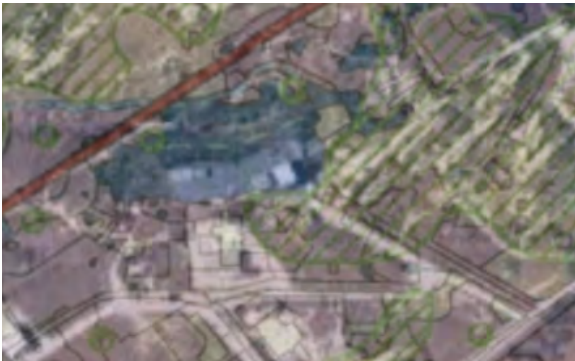
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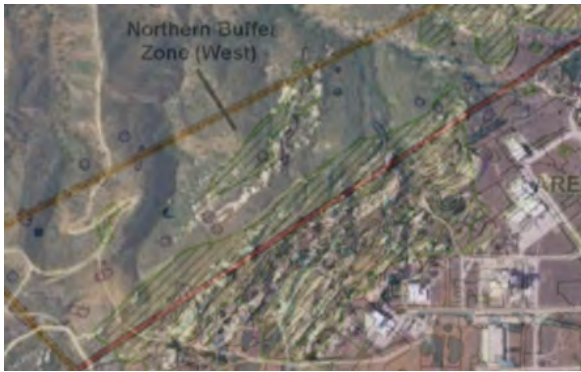


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List of areas that show exclusion using green shading despite historical operational data and current sampling results: SRE

- Hot Cave area
- Old Conservation Yard/New Conservation Yard
- SRE Pond and tarp areas
- Hot Lab parking/storage area
- Building 55 perimeter as well as contents which has had very limited sampling.
- Building 100 *backyard area
- Building 19 *backyard area
- Building 56 Landfill
- Building 56 Landfill Excavation Area
- Esada/Shooting Range
- Area IV Burrpitt drainage rock outcroppings
- RMHF
- RMHF Holdup Tank Area
- RMHF Dam Area and hillside
- Building 4024 Driveway tank area
- Buffer Zone road area (80 barrel debris area)
- Building 100 Trench

Reference videos explaining some of these comments and frustrations in more depth:

<https://www.youtube.com/watch?v=9yimSTHsA9U&list=PLT5JQTuAcLLAAAdCAFAZ80pSn-87b-uoJz>

<https://www.youtube.com/watch?v=2PNtw7XTVSE&t=57s>

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This photograph shows the former SRE complex and a road that extends from the complex to the debris area in lower left section of photograph (OCY hillside drainage filled with thousands of barrels and debris)



EMCBC-2017-00134-F
Aerial of Area IV 1962

Much of these areas would be excluded according to the non-AOC alternatives as well as the green shading of exceptions from cleanup. This should be corrected so that these problem areas are not excluded. We should not be arguing about the worst areas and we cannot come together with legitimate debate on exceptions if these areas are so blatantly excluded despite data to the contrary.

Thank you for the opportunity to comment on this important process.

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**Commenter No. 64: Mohsen Nazemi, Deputy Director,
Department of Toxic Substances Control**



April 13, 2017

Ms. Stephanie Jennings
NEPA Document Manager
U.S. Department of Energy
4100 Guardian Street, Suite 160
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DEPARTMENT OF TOXIC SUBSTANCES CONTROL'S COMMENTS ON THE
DEPARTMENT OF ENERGY'S DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR REMEDIATION OF AREA IV, SANTA SUSANA FIELD LABORATORY,
VENTURA COUNTY, CALIFORNIA

Dear Ms. Jennings:

The Department of Toxic Substances Control (DTSC) has completed its review of the Department of Energy's (DOE) draft Environmental Impact Statement (DEIS) for *Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL)* and would like to thank DOE for the opportunity to provide the following comments. We summarize our key concerns with DOE's DEIS in this cover letter, and include a more thorough discussion of specific concerns in the attachment to this cover letter.

DTSC's Key Concerns with DOE's DEIS

1. The DEIS fails to only include alternatives that describe how DOE will comply with the 2010 Administrative Order on Consent (AOC). This is inconsistent with DOE's earlier statement describing the cleanup's purpose and need. Given this, we must reiterate that DTSC will hold DOE accountable for complying with the AOC.
2. The DEIS fails to provide sufficient information or analysis for DTSC to determine if any of the DEIS' alternatives would comply with the AOC.

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64-1 The Draft EIS (and Final) includes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. DOE recognizes that the EIS also includes alternatives, the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative, implementing technical elements that differ from those in the 2010 AOC. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. That is what DOE has done in this EIS through the evaluation of the Cleanup to Revised LUT Values Alternative and the two scenarios of the Conservation of Natural Resources Alternative. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. The 2010 AOC does not change this requirement; in accordance with the AOC, Section 7.11, "Compliance with Applicable Laws and Regulations," all actions taken pursuant to the agreement by DOE will be undertaken in accordance with applicable local, State, and Federal laws and regulations. This clause recognizes that DOE must comply with NEPA.

The specific wording of DOE's purpose and need for agency action has been refined since it was first stated in the 2007 Advance Notice of Intent, but the overall message expressed by the statement has remained consistent. Thus, DOE needs to remediate those portions of SSFL for which it is responsible in a manner that is protective of the environment and the health and safety of the public and workers. The change noted by the commenter in the statement does not change DOE's responsibility for complying with agreements, as well as with other requirements such as regulations and orders. DOE disagrees with the commenter's statement that the EIS does not support the conclusion that the Cleanup to AOC LUT Values Alternative supports an AOC Cleanup. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of assertions that none of DOE's alternatives would clean up Area IV and the NBZ in accordance with the 2010 AOC. DOE's understanding of the implementability of cleanup in accordance with the 2010 AOC has evolved since 2012. As discussed in Chapter 2, Section 2.3.3 of the EIS, DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under NEPA, DOE developed two alternatives in addition to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the environment and the health and safety of the public and workers. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4, of this EIS.

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3. The DEIS describes at length a number of challenges to implementing of the AOC, however, it fails to take a hard look at how to overcome those challenges, including:
 - a. Inadequate survey, analysis, and use of agreed upon processes to identify potential options for acquiring clean backfill soil. DOE will use this soil to achieve cleanup standards and restore the land's natural contours following the removal of contaminated soil.
 - b. Conclusory statements about DOE's inability to achieve the AOC's preliminary cleanup standards, which are contained in the project's "Look-Up Table" (LUT), without a thorough examination of available options for overcoming those challenges.
4. The DEIS assumes habitat for protected plants and animals is exempted from cleanup, but fails to explain how DOE proposes to utilize the AOC's process of conferring with state and federal agencies on site-specific decisions to protect habitat.
5. The DEIS proposes to rely on the natural process of degradation (monitored natural attenuation) to reduce levels of certain contaminants to achieve cleanup standards, which may take decades and therefore violate the AOC's prohibition on leaving contamination where it is found. Moreover, the DEIS fails to examine ways to accelerate the natural degradation process.
6. The DEIS assumes trucks will use 2019 air pollution control technology over the estimated 15-year timeline for the cleanup. This fails to account for the use of improved air pollution control technologies over time, which in turn undercuts the analysis needed of the project's potential air pollution impacts.

The DEIS Appears to be Inconsistent with DOE's Established Purpose and Need for the Cleanup Project

The National Environmental Policy Act (NEPA) compels DOE to analyze the environmental impacts of this cleanup project, and establishes certain requirements when DOE conducts its analysis. One such requirement is that DOE must describe the purpose and need for taking this action. This Purpose and Need Statement explains the reason DOE is proposing the cleanup, what DOE expects to achieve with the cleanup, and provides the basis for DOE's development of a reasonable range of alternatives in its NEPA document for the cleanup.

DOE issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement for this cleanup in February of 2014. This NOI contained a revised purpose and need for

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- 64-2 Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding your concern about how DOE addressed the 2010 AOC in the EIS. Also see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for further discussion on biological and cultural exemptions. The application of exemptions is pertinent to all alternatives, and is not only contemplated by the elements of the AOC, but also meets applicable Federal, State and local laws, as required by the AOC. Monitored natural attenuation is an acceptable form of in situ treatment as allowed by the AOC (see Section 1.8.2 of the AOC). DOE's proposed application of monitored natural attenuation to address low concentrations of TPH is addressed in the revised Chapter 2, Section 2.3.2 of this Final EIS. The Draft EIS estimates of soil removal, proposed exemption areas, and monitored natural attenuation soil volumes are based on data available to develop the EIS and will be refined as additional data becomes available. Refined estimates will be included as soil remediation implementation action plans are developed that would be submitted to DTSC for approval prior to implementation. DOE will continue to work with DTSC to ensure the analysis and information provided is sufficient for DTSC's evaluation.
- 64-3 Despite the technical challenges associated with implementing the AOC, DOE evaluated an alternative that meets the technical elements of the AOC (the Cleanup to AOC LUT Values Alternative). The Cleanup to AOC LUT Values Alternative and the potential impacts are evaluated based on the actions needed to implement it. However, based on currently available information on the technical elements of the 2010 AOC, DOE evaluated soil remediation alternatives that, when completed, would leave Area IV and the NBZ in a state that was protective of human health and the environment. These are the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative which are based on CERCLA-like risk assessment protocols. The Cleanup to Revised LUT Values Alternative uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easements and agreement, i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor. (In 2017, Boeing and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements [conservation easements] with Ventura County [Ventura County 2017a, 2017b] in 2017 that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit

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the cleanup project that stated, "DOE needs to complete remediation of SSFL Area IV and the Northern Buffer Zone to comply with applicable requirements for radiological and hazardous contaminants. These requirements include regulations, orders, and agreements, including the 2007 Consent Order, as applicable, and the 2010 AOC."

In our April 1, 2014 letter regarding DOE's NOI, DTSC emphasized the importance that DOE's EIS alternatives must comply with the AOC and applicable State laws and regulations for the soil cleanup.

The draft EIS identifies four possible soil cleanup alternatives:

1. No Action Alternative
2. Cleanup to AOC Look-up Table (LUT) Values
3. Cleanup to Revised LUT Values
4. Conservation of Natural Resources

Based on the information provided in the DEIS, the alternatives appear to be inconsistent with DOE's Purpose and Need Statement. It appears that alternatives 3 and 4 do not meet the AOC requirements. In addition, while DOE states that alternative 2 does meet the AOC requirements, the data and analysis in the DEIS do not sufficiently support an AOC cleanup.

The DEIS Fails to Provide Sufficient Information to Determine if any Alternatives Comply with the AOC

The DEIS fails to completely justify the interpretation of areas that contain protected biological and cultural resources that may qualify for an exception to the AOC's cleanup requirement. DOE has failed to justify these exception areas, as defined in the AOC, for all alternatives. Similarly, DOE identifies monitored natural attenuation of waste that is overly broad given the potential lengths of time needed to complete degradation. There is uncertainty about whether this process can achieve sufficient degradation to comply with the AOC.

Because alternatives 1, 3, and 4 do not, on their face, comply with the AOC, they are not feasible for analysis. Therefore, DTSC did not comprehensively review those alternatives and has provided only limited comments related to these three alternatives.

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residential, agricultural, or commercial development or uses of the site.) The Residential Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on an onsite suburban residential receptor without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the future use of the land as open space.

64-4 DOE does not agree with DTSC that DOE has used "Inadequate survey, analysis, and use of agreed upon processes" to identify potential options for acquiring backfill. Nor does DOE agree that "DTSC has neither been engaged in, nor aware of any efforts DOE has made to coordinate its efforts with EPA as specified in the AOC." As discussed in the 2010 AOC confirmation protocol, DOE is to "identify the potential backfill source locations" for EPA to sample. DOE notified DTSC in a letter dated December 21, 2016 (DOE 2016) of DOE's efforts to locate backfill meeting the AOC requirements. The AOC states: "If an onsite or offsite source of backfill soils that achieves all (emphasis added) Look-up Table values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process." DOE is still awaiting DTSC's response on this matter.

DOE conducted an initial evaluation to identify locations to provide to EPA and those locations sampled failed to meet the LUT values. There is no reason to engage EPA until viable locations are identified. That is why on December 21, 2016, DOE (John Jones, ETEC Federal Project Director) provided a letter to DTSC (Ray Leclerc, DTSC SSFL Division Chief, Brownfield & Environmental Restoration Program) that presented DOE's efforts to date to locate a source of backfill that meets 2010 AOC requirements (DOE 2016). Because a source of backfill that meets all chemical LUT values had not been located, the letter was DOE's initiation of consultation with DTSC on this subject, as is required by the 2010 AOC. Additionally, based upon DTSC's request for more information, DOE in January 2017 provided DTSC all backfill soil sampling results. The responsibility for identifying backfill ultimately lies with DTSC per the 2010 AOC, which states: "If an onsite or offsite source of backfill soils that achieves all LUT values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill" (emphasis added). Regardless of whether EPA is engaged, it is DOE's interpretation that the 2010 AOC puts the responsibility for finding backfill that meets the requirements of the AOC clearly on DTSC.

In response to the commenter's statement that "DOE did not adequately explore areas for potential fill that had similar lithology and chemical makeup," DOE did explore

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The DEIS Focuses on Technical Challenges Without Sufficiently Analyzing Options to Overcome Those Challenges

The DEIS identifies a number of areas where it claims that implementing the AOC poses technical challenges, but does not sufficiently pursue possible solutions. By overlooking solutions to these challenges, DOE is making the case that it cannot implement the AOCs in an effective manner. DTSC is committed to require that DOE comply with the AOC, and DOE must pursue solutions to achieve that compliance.

For example, DOE's assertion that it is not possible to find backfill that will meet the LUT values is not fully supported. Whether the goal is to meet the LUT values or biological needs for successful mitigation, the composition of the backfill is a very important factor. While DOE did find backfill areas that had values exceeding the LUT values, DOE did not adequately explore areas for potential fill that had similar lithology and chemical makeup. In addition, DTSC has neither been engaged in, nor aware of any efforts DOE has made to coordinate its efforts with US EPA as specified in the AOC. Finally, the Confirmation Protocol, Attachment C of the AOC, includes the following:

If an onsite or offsite source of backfill soils that achieves all Look-up Table values cannot be reasonably found, then DTSC, DOE and USEPA shall enter a consultation process and DTSC shall determine the best available source of backfill.

Please note that, while DOE provided limited information to DTSC in a December 21, 2016 letter regarding backfill material, as of this writing there has not been any follow-up with DTSC about this consultation process.

DOE makes a number of conclusive criticisms of the LUT values. DTSC does not accept all of DOE's conclusions. For example, while DOE's DEIS has identified the technical false positive, and achieving the Minimum Detection Concentrations (MDCs) as issues associated with implementation, DOE has not proposed specific resolutions. There are a number of concepts that DTSC believes may help resolve these issues, such as the following:

- o Improving specific cleanup data quality objectives.
- o Examining multiple laboratories' capacity to achieve MDCs.
- o Evaluating methods to improve polychlorinated biphenyl detection issues.

The AOC Confirmation Sampling Protocol refers to comparing the "contaminants of concern observed in the confirmation samples" to LUT values. Developing a more precise list of contaminants of concern that more accurately reflects the most indicative

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additional locations for backfill, including DTSC's background sampling sites (see Appendix D). DOE considers the background sites to be "reasonable" locations as they have "similar lithology and chemical makeup" as Area IV (DTSC 2012b, HGL 2011). But the soil cannot be used as backfill because at the background location 42 percent of the chemicals sampled had at least one sample above its 2010 AOC LUT value and 26 percent of the sample locations had a sample with at least one chemical above its LUT value.

Most of DTSC's suggestions (listed below) require that DTSC amend the 2010 AOC and/or chemical LUT values. As discussed below, the options suggested by DTSC (see, "Main Comments Item 5 of the Attachment "The Department of Toxic Substances Control's (DTSC's) Detailed Comments on The Department of Energy's (DOE) draft Environmental Impact Statement (DEIS) for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL) (January 2017," to this DTSC comment letter) would require modifications to the AOC, as allowed in Section 8 of the AOC, in order to be implemented.

- "Since the first proposed project involves priority cleanup of radionuclides to LUT values with cleanup of nearby chemicals to RBSLs, these suggested steps for determining if potential backfill exceeds local background for chemicals may be of lesser priority." This statement by DTSC is one that is difficult to understand. It seems that DTSC is suggesting that DOE, as part of the first soil remediation action, remove soil down to LUT values and then replace that soil with backfill that also does not meet the LUT values. DTSC has the responsibility to resolve the problems relative to finding suitable backfill.
- "Develop Constituents of Concern." The 2010 AOC does not allow for constituents of concern. The AOC confirmation protocols state that soil results "will be compared directly to the concentrations listed in the 'Look-Up' Tables." "The 'Look-Up' levels cannot be exceeded by any sample." The 2010 AOC does not allow DOE or DTSC to pick and choose amongst the LUT values. Therefore, DOE must consider all LUT values and cannot selectively choose to utilize only a subset of the LUT values. DTSC has the responsibility to address the issues with LUT values (such as the background site soil failing the LUT values). The use of "constituents of concern" is not a consideration in the 2010 AOC.
- "Sample results used for comparison to 2010 AOC LUT values should be at or above the Method Reporting Limit (MRL)." The use of multi-laboratory MRLs was the subject of lengthy discussions during a series of meetings with DTSC technical

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chemicals at the site, rather than all of the possible chemicals, would reduce both the likelihood of false positives, and focus attention on the impacted areas.

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The DEIS Assumes Habitat is Exempt from Cleanup Without Explaining how DOE will Confer with State and Federal Wildlife Agencies Responsible for Assessing Protected Habitat

The DEIS' identification of areas subject to no cleanup through the application of biological exceptions, as defined in the AOC, is far too generalized. These determinations will require specific and final input and opinions from both the US Fish and Wildlife Service and California Department of Fish and Wildlife. DTSC is not endorsing the areas DOE identified as exceptions in the DEIS. As they represent preliminary estimates, DTSC will oversee and approve the final determination regarding exceptions as defined in the AOC when there is sufficient data and area specific analysis to support a final decision.

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The DEIS Presumes the Natural Degradation of Certain Contaminants will Achieve AOC Cleanup Standards Without Sufficient Support or Analysis

In the DEIS, DOE referenced the use of in-situ biotreatment of soil. DTSC recommends that DOE explore methods and technologies that can accelerate the degradation of key contaminants such as total petroleum hydrocarbons and polycyclic aromatic hydrocarbons in order to shorten cleanup timeframes and reach the goals of the AOC with greater certainty. DTSC retains authority and jurisdiction to direct additional actions over any areas where monitored natural attenuation or biotreatment is part of the proposed remedy. DTSC will consider the cleanup actions ability to achieve the cleanup values and timeliness to complete cleanup when evaluating cleanup methods.

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The DEIS Fails to Appropriately Analyze Vehicles' Use of Air Pollution Control Technologies that Improve Over Time

The DEIS discusses mitigation measures designed to minimize the project's potential harmful impacts on air quality. A key mitigation measure is the assumption that DOE will require trucks, which haul soil to and from Santa Susana, to use 2019 emission control technologies over DOE's estimated 15-year timeline for the cleanup project. This fails to recognize that air pollution control technology improves over time. Since construction of the project will probably take several years, DTSC recommends that DOE's final EIS specify, for each year of the project, the earliest allowable model year of truck that DOE

64-8
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and management staff in 2011 and 2012. DTSC's lead chemist was critical of the process that was being promoted by DTSC's management in developing MRLs. "The Environmental Chemistry Laboratory does not recommend the process outlined in the current Draft Technical Memorandum to serve as the foundation for site characterizations and for the development of the MRL LUT values. ECL cannot attest to the process as robust, technically sound, and defensible" (DTSC 2012a). DOE agrees with DTSC that adjusting MRLs to reflect reasonable decision values would be one way of addressing the backfill suitability issue. This would require modifications to LUT values that would take into consideration reasonable laboratory reporting limits consistent with the ECL recommendations EPA protocols used nationwide for laboratory development procedures (not ad hoc) and would be technically defensible as recommended by the DTSC technical staff.

- "Sample analyses and results should consider, and minimize to the extent possible, analytical challenges for low levels of TPH and naturally occurring organic materials." The challenges for TPH are twofold. One deals with the failure by DTSC in its background study to analyze for TPH. As the soil treatability studies showed, TPH-like chemicals are present naturally in the environment. DTSC also did not consider whether the 5 parts per million (ppm) LUT value was technically achievable in most laboratories. Per the 2010 AOC LUT value footnote: "For locations where TPH is the sole contaminant, a cleanup strategy will be considered based on the findings of the soil treatability study." DOE's recommendation regarding a "cleanup strategy" is for DTSC to recognize the technical challenges of a 5 ppm LUT value and to replace it with a value that is used in California (typically in the 100 to 400 ppm range [San Mateo 2006]). DOE does note that the soil treatability studies determined that between 300 and 500 parts per million of TPH-like chemicals observed in Area IV soil samples have a natural origin (Nelson 2015a).
- "Sample analyses should consider, and minimize to the extent possible, analytical challenges for pesticides, herbicides and PCBs." DTSC's Office of Analytical Chemistry brought this issue to DTSC's management in 2012, disagreeing with the approach being promoted by DTSC for establishing LUT values for pesticides, herbicides and PCBs (Dr. Ting memorandum of October 30, 2012). DOE cannot consider addressing the challenges until DTSC management addresses Dr. Ting's concerns. The Draft and Final EIS address this issue in Chapter 2, Section 2.2.3.

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will use during construction. Relatedly, the final EIS should also analyze the air pollution control benefits related to this revised mitigation measure.

Please note that DTSC's additional section-specific comments are attached. Again, DTSC appreciates the opportunity to comment on DOE's DEIS for this site and we look forward to working with DOE in achieving the cleanup in a manner consistent and in compliance with the AOC.

If you have questions regarding the comments, please contact me at [REDACTED] or one of my staff, Ray Leclerc at [REDACTED] or Mark Malinowski at [REDACTED]

Sincerely,



Mohsen Nazemi, M.S., P.E.
Deputy Director
Brownfield & Environmental Restoration Program
Department of Toxic Substances Control

Attachment: *DTSC Specific Comments*

cc: (via email)

Mr. John Jones
Federal Project Director
DOE-EETC
[REDACTED]

Mr. Ray Leclerc
Division Chief
Brownfields & Environmental Restoration Program
Department of Toxic Substances Control
[REDACTED]

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- “Sampling of potential source should be designed to minimize sampling error.” Decision criteria (in this case, as they are affected by the LUT values) are a key design element that contributes to sampling and analytical error. It would appear that DTSC did not adequately address decision criteria when selecting the LUT values (e.g., soil at the background location does not meet the LUT values).
- “Backfill should be assessed for biological suitability.” DOE agrees that the backfill should be suitable for biological growth, but this is not the issue. The issue is finding soil that meets the current soil 2010 AOC LUT values and is of the same geologic formation (per AOC Confirmation Protocol, page 3).

Subsequent to this DTSC comment submittal, DOE and DTSC staff met on July 26, 2017 to discuss the issues associated with finding acceptable backfill. At that time, DTSC informed DOE that this issue would not be addressed by DTSC for at least 2 years. Given this schedule, DOE indicated that if backfill soil that incorporates the technical provisions of the 2010 AOC was not addressed by this Final EIS completion, DOE would only be able to conclude that no backfill soil supporting implementation of the AOC is available. DTSC staff acknowledged that fact and said this conclusion in this Final EIS is agreeable to them at that time. DOE communicated that the identification of a backfill source is a critical component of soil cleanup and restoration planning, and it cannot complete remedial action plans until a source is identified.

Refer also to Section 2.3, “Suitable Backfill Soil,” of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source.

64-5 DOE does not agree with DTSC that the manner to improve analytical detection is to research alternative methods of analysis. There is nothing the AOC that requires DOE to improve analytical methods. With regard to the commenter's criticism of the statement about DOE's inability to achieve the AOC preliminary cleanup values, see comment response 64-3.

DOE agrees that “improving specific cleanup data quality objectives” is an important first step. The 2010 cleanup to background AOC objectives as currently being considered by DTSC are not implementable because the analytical objectives sought by DTSC management cannot technically be met. DTSC needs to address the decision error issue, and establish 2010 AOC LUT values that the background site can meet. DOE and DTSC staff have already gone through multiple laboratory MDC exercises. It was DTSC's decision to drive laboratories to achieve lower detection limits than those typically used by the analytical industry, a posture that DTSC's lead chemist objected to. The primary issue that needs to be addressed is one of making cleanup decisions

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cc: (via email)

Mr. Mark Mallinowski
 Branch Chief
 Santa Susana Field Laboratory and Northern California School Branch
 Department of Toxic Substances Control
 [REDACTED]

Ms. Nancy Bothwell,
 Senior Staff Counsel
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using the analytical MDC without consideration of the decision error; an omission that results in the misidentification of uncontaminated soil as contaminated soil. EPA cautioned DTSC on this matter (HGL 2012c) and DTSC's own staff have discussed the issue at public forums (DTSC 2013c). DOE agrees that "developing a more precise list of contaminants of concern that more accurately reflects the most indicative chemicals at the site..." is one step towards reducing the decision-error problem. DOE would welcome the opportunity to discuss this issue with DTSC.

64-6 The Draft EIS and this Final EIS do not assume that habitat for protected plants and animals is exempted from cleanup. As indicated in Chapter 2, Section 2.3.2, of this EIS, if levels of constituents in exemptions areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals. There would be some disturbance, but DOE's objective would be to minimize disturbance to that needed to protect public health and the environment. Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of this topic and DOE's response. The Draft EIS indicated that exemption areas for biological resources would be determined through consultation with the U.S. Fish and Wildlife Service (USFWS) as part of the USFWS Biological Opinion and the California Department of Fish and Wildlife (CDFW) through its permitting authority. Appendix E, Table E-4 of the Draft EIS and this Final EIS provides a summary of meetings with USFWS and CDFW held by DOE, most of which involved participation by DTSC. The USFWS subsequently issued its Biological Opinion, a copy of which is included as Appendix J of this EIS. Proposed exemption areas would be considered in detailed remediation plans that include a point-by-point analysis and site-specific plans for remediation using risk-based criteria to protect human health and careful remediation approaches to minimize unnecessary damage to sensitive species or cultural resources.

64-7 Monitored natural attenuation (MNA) was only one of several soil treatment options considered by DOE. As is stated in the Draft EIS, monitored natural attenuation would be only considered for "low concentrations" of TPH impacted soils and would be used only after DTSC approves its use. See Chapter 2, Section 2.3.2, of this Final EIS for additional information. DOE did look at other alternative treatment methods for the soil (Matsumoto and Martin 2015; Nelson et al. 2015b). However, soil treatment is normally performed to reduce contaminant levels to below hazardous waste or risk-based standards. Treatment is not intended to remove 100 percent of the contaminant. There will always be detectable contaminants in the soil following treatment above LUT values. This issue is even more relevant for TPH chemicals that are produced naturally

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The Department of Toxic Substances Control's (DTSC's) Detailed Comments on the Department of Energy's (DOE) draft Environmental Impact Statement (DEIS) for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL) (January 2017).

Main Comments

1. **Chapter 1: Project Approach:** DTSC strongly reiterates that the completed soils cleanup in Area IV and the Northern Buffer Zone (NBZ) will ultimately require full compliance with the 2010 Administrative Order on Consent (AOC) requirements and this must be reflected in DOE's EIS.

Also, the EIS must make it clear that key elements of the proposed soil remediation alternatives must comply with the AOC requirements. For example, Section 7.11 of the AOC states "All actions taken pursuant to this Order by DOE shall be undertaken in accordance with applicable local, State, and federal laws and regulations". DTSC recognizes that DOE's evaluation of the Soil No Action Alternative is required by Council on Environmental Quality National Environmental Policy Act (CEQ NEPA) regulations. Ultimately however, the cleanup remedy selected must comply with the AOC.

The EIS must include a clearer discussion of potential use of the alternatives analysis in various phases of the cleanup, and clarify that ultimate requirement of full compliance with the AOC is necessary.

2. **Section 1.3, Page 1-7, 2010 AOC Text Box:** The last sentence in the text box indicates "Per the 2010 AOC, the schedule shall ensure that the identified activities can be accomplished by 2017 or sooner". To clarify, the DTSC-approved Soils Remedial Action Implementation Plan (SRAIP) will include a schedule for implementation of the planned remedial actions. Section 7.17 of the AOC states that all plans, schedules, and reports that require DTSC approval and are submitted by DOE pursuant to the Order and are not subject of dispute resolution under Section 7.19.1 through 7.19.9 are incorporated in the Order upon approval by DTSC. The schedule contained in the DTSC-approved SRAIP decision document will be the DTSC approved schedule, under the Order.
3. **Section 2.2.1, Page 2-4:** DOE states their expectation, that in order for implementation of any alternative to be consistent with the AOC, changes to the AOC would be required. Please note that as mentioned earlier, DTSC is committed to fully enforcing the 2010 AOC requirements.
4. **Section 2.2.3, Page 2-12:** DOE states if an area with chemicals or radionuclides exceeding AOC LUT values is inaccessible for safety reasons, the AOC allows exemptions of up to 5 percent of the total volume of soil above AOC Look-Up Table (LUT) values. This exemption is described in Attachment B "Final

in the soil. DOE does note that the soil treatability studies determined that between 300 and 500 parts per million of TPH-like chemicals observed in Area IV soil samples can have a natural origin (Nelson et al. 2015a). [DOE also notes that DTSC knew that the TPH LUT would require adjusting. The asterisk in the DTSC LUT memo states: "For locations where TPH is the sole contaminant, a cleanup strategy will be considered based on the findings of soil treatability study". Those studies were completed 4 years ago. In addition, DOE disagrees that MNA leaves contamination where it is found. By the very nature of MNA, contamination is reduced via natural processes and is an acceptable method to deal with contamination in certain situations, such as those in Area IV and NBZ, and is consistent with Section 2.9 of the AOC.

64-8 The Draft EIS Mitigation Measure AQ-1 proposed to implement a haul truck fleet where individual trucks would be no more than five years old during each year of cleanup activities. This measure would ensure that trucks would have (1) the newest or relatively new on-road emission standards and (2) a minimum level of engine deterioration and resulting degradation in emissions due to being relatively young in age. This mitigation measure is intended to reflect a rolling 5-year limit. For example, in year 2034, the goal would be for the oldest truck in the fleet at that time to be model year 2029. The Draft EIS presented the air quality benefits associated with implementation of Mitigation Measure AQ-1 in Chapter 4, Sections 4.6.4.1, 4.6.4.2, and 4.6.4.3 under subsection Green Cleanup Impacts and this Final EIS also presents this analysis. This Final EIS also clearly states the goal that individual on-road trucks within the project fleet would be no more than 5 years old during each year of cleanup activities.

64-9 This Final EIS was revised to clarify the interrelation of the SRAIP and DTSC's required approval of the SRAIP and that the 2017 date is no longer an AOC issue.

64-10 DOE agrees that the use of the 5 percent exception to the 2010 AOC for issues such as safety and accessibility is subject to DTSC's approval.

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Agreement in Principle" of the AOC. However, DOE's example for use of this exemption (safety issues due to inaccessibility) is subject to DTSC approval in the final cleanup decision documents.

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5. **Section 2.3.2, Page 2-22 and Appendix D, Page D-45 Concerns about Locating Backfill Material Meeting AOC LUT Values:** The Final Agreement in Principle of the AOC states that backfill/replacement soils must not exceed local background levels, but if backfill that meets the LUT values cannot be reasonably found, then after consultation between DTSC, DOE and USEPA, DTSC shall determine the best available source of backfill. The following concepts are potential systematic approaches for working within the framework of the AOC's point-by-point comparison process with the LUT for chemicals, and for managing the uncertainty that may lead towards generation of false positives. Ultimately, DTSC will need more data to evaluate the acceptability of off-site backfill soils, as well as the ability to verify these results.

Since the first proposed project involves priority cleanup of radionuclides to LUT values with cleanup of nearby chemicals to RBSLs, these suggested steps for determining if potential backfill exceeds local background for chemicals may be of lesser priority.

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- Develop Constituents of Concern.
- Sample results used for comparison to AOC LUT values should be at or above the Method Reporting Limit (MRL).
- Sample analyses and results should consider, and minimize to the extent possible, analytical challenges for low levels of TPH and naturally-occurring organic materials.
- Sample analyses should consider, and minimize to the extent possible, analytical challenges for pesticides, herbicides and PCBs.
- Sampling of potential source should be designed to minimize sampling error.
- Backfill should be assessed for biological suitability.

6. **Section 2.3.3, Page 2-25: Third Ppgh:** This section indicates, "The 2010 AOC confirmation protocol addresses and compares every soil sample with the AOC LUT values for 116 chemicals and 16 radionuclides." The AOC's Confirmation Protocol (Attachment C) states that "*The concentrations of radiological and chemical contaminants of concern (COCs) observed in the confirmation samples will be compared directly to the concentrations listed in the "Look-up" Tables of radiological and chemical cleanup levels.*" Confirmation sampling can potentially utilize COCs to represent the key contaminants of interest for purposes of making confirmation decisions. The AOC requirements refer to COCs in the confirmation sampling process.

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7. **Section 2.4.1, Page 2-31, Cleanup to Revised LUT Values Alternative:** As previously stated, this Alternative does not appear on its face to comply with the

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- 64-11 DOE notes that DTSC states that confirmation sampling "can potentially utilize COCs" [contaminants of concern]. Until DTSC demonstrates that it is willing to accept a reduced number of contaminants of concern (effectively reducing the number of contaminants with AOC LUT values), DOE must assume that it will not be allowed.
- 64-12 Please refer to the response to comment 64-1. The Cleanup to Revised LUT Values Alternative proposes use of revised chemical LUT values based on risk-based screening levels instead of background or laboratory detection levels as detailed in the 2010 AOC. Otherwise, it meets the technical elements of the 2010 AOC (e.g., this alternative assumes use of the radionuclide AOC LUT values).

DOE considers this to be a complete alternative; therefore, there would be no second phase under this alternative.

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AOCs. Regarding phased approaches to cleanup, any soil with contamination above the LUT values at the end of the first phase would need to be remediated to comply with the AOCs in the second phase.

8. **Page 2-33, Conservation of Natural Resources Alternative:** The first paragraph in this section states that under this alternative, Area IV soils would be cleaned up to Suburban Residential risk-based screening levels (RBSLs) for chemicals. Radionuclides would be remediated "to levels as low as reasonably achievable (ALARA) below the DOE standard of 25 millirem per year (DOE Order 458.1) to the hypothetical suburban resident." However, the AOC states that soil cleanup is to be to Background levels. The Natural Resources Alternative does not comply with the AOC.

9. **Section 3.4.2.1, Pg. 3-41, Pgph 4.** The text in the draft EIS states:

"The purpose of the GWIM is to collect data on aquifer properties, remove some contaminants mass, and possibly control plume migration for locations within SSFL that exceed 1,000 parts per billion TCE in groundwater. For Area IV, this definition applies to FSDF."

To clarify, DTSC stated that "groundwater extraction should be initiated at all groundwater monitoring wells within source zones, defined as any monitoring wells where the reported concentrations of TCE have been 1,000 ug/L or higher and/or any monitoring wells where TCE concentrations and water levels are trending higher since shut-down of groundwater extraction wells." The text in the EIS should be modified to accurately reflect the purpose of the Groundwater Interim Measures (GWIM).

10. **Section 4.1.1, Page 4-8:** Please confirm the statement regarding zoning for the Northern Buffer Zone and other areas of Santa Susana for consistency with Ventura County's zoning designations, including the county's General Plan.

11. **Table 6-2 (Potential Mitigations), Page 6-17:** Mitigation Measure AQ-1 states "For on-road trucks, a fleet of trucks no more than 5 years old." In order to minimize the air quality impacts of the project, DTSC recommends that the final EIS specifies the use of the earliest allowable model year of truck during construction, which may expand over several years. DOE should also specify which model year haul trucks will be used in each year during construction phase of the project, in DOE's Final EIS. Relatedly, the final EIS should also analyze the air pollution control benefits related to this revised mitigation measure.

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64-13 As discussed in response to comment 64-1, the Conservation of Natural Resources Alternative is a risk-based alternative that would implement cleanup criteria that differ from the AOC LUT values. In conformance with the AOC and in compliance with NEPA, this EIS does analyze an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed and in light of identified technical issues with implementing the 2010 AOC, this EIS also analyzes alternatives that consider risk to human health and ecological risks as well as the protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with the approach used by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by U.S. Environmental Protection Agency (EPA) at CERCLA sites. The comparative analysis of these alternatives allows the reader to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

Although the Draft EIS addressed radionuclide cleanup based on DOE's 25 millirem dose per year objective, the Conservation of Natural Resources Alternative (both scenarios) analyzed in this Final EIS employed a risk assessment similar to that used under CERCLA. The risk analysis resulted in radiological risks in the 10⁻⁵ range as determined based on CERCLA-based risk assessment considerations. Soil cleanup based on risk resulted in a predicted dose much lower than 25 millirem per year. Please refer to Section 2.6, "Comparison of Radiation Doses," of this CRD for further discussion of the 25 millirem per year dose limit.

64-14 Chapter 3, Section 3.4.3.1 of this Final EIS was revised to clarify the purpose of the groundwater interim measures per DTSC's comment.

64-15 For this Final EIS text was reviewed and revised to reflect Boeing's conservation easements and agreements. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. These conservation easements and agreements imposes restrictions beyond those in county zoning and planning documents.

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Department of Toxic Substances Control

Specific Comments

12. **Section 2.6.3, Page 2-52:** Text states "The Metals Clarifier TCE plume and the RMHF TCE plume concentrations are less than 10 parts per million". Units should be corrected to parts per billion.
13. **Section 2.8.1.4, Page 2-106, Ppgh 3 (Climate Change):** Text indicates, "Peak annual emissions of CO2 would range from about 3,000 to 8,900 metric tons". The upper range for the cleanup to revised LUT scenario (17,000 metric tons) is higher than the upper range for the LUT scenario (8,900 metric tons). Please correct or explain these values.
14. **Section 3.1.1, Page 3-3, Ppgh 5:** Text indicates that Runkle Canyon is to the northeast, but it actually is to the northwest of SSFL. Please clarify or correct.
15. **Figure 3-13, Page 3-23:** Features described in the legend are not consistent with what is depicted in the Figure. For example, underground storage tanks are listed in the key, but are not shown in the figure. In addition, some RFI sites shown in the figure are not listed under the key. Please address for consistency.
16. **Section 3.2.5.3, Page 3-27, Ppgh 4:** The reference cited for "Rocketdyne, 2000" does not appear on DOE's website list of references for Chapters 1 through 8.
17. **Section 3.2.5.4, Page 3-29:** The first paragraph of this section indicates, "The 2010 AOC (DTSC 2010a) addresses soil and bedrock containing chemicals and radionuclides exceeding LUT values." To clarify, section 1.8.4 of the AOC includes weathered bedrock within the definition of "soils".
18. **Section 3.4.2.8, Page 3-45:** The cited reference for CH2MHill, 2008 is presumably intended to address Building 4100, yet the document makes no mention of this building. Please clarify.
19. **Section 3.9.2, Page 3-103, (Public Radiation Exposure):** The second paragraph in this section states that DOE collects air samples and monitors radiation at locations in and around Area IV and the Northern Buffer Zone (NBZ). Please indicate how long DOE has been collecting such radiation monitoring data, and where the public can access it.
20. **Section 3.10.2, Page 3-122: Last Ppgh:** To clarify for the RMHF, an interim status Part A application was accepted and unit was granted interim status, and thus subject to RCRA regulations for Interim Status, which are similar to or more prescriptive than RCRA regulations for permitted units. Reference to "HMHF" is likely a typographical error, and likely should be HWMF.
21. **Section 4.3.1.2, Page 4-39: Last Ppgh:** Refers to rainfall season of December through May, yet section 3.3.1 in the EIS refers to a different period (see page 3-31 of Chapter 3). Please clarify or correct.

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- 64-16 Chapter 2, Section 2.6.3 of this Final EIS was revised to correct the units for the Metals Clarifier TCE plume and the Radioactive Materials Handling Facility (RMHF) TCE plume concentrations.
- 64-17 The values in the text cited in the comment are correct. Material haul trucks would be the main source of emissions from the proposed combinations of cleanup activities. During the peak year of activities, both scenarios (AOC LUT values and revised LUT values scenarios) propose excavating and transporting the same volume of soil. Under the Cleanup to Revised LUT Values Alternative, all of the soil excavated in the peak year exceeds the risk-based standards for site cleanup. As a result, these soils would be transported to disposal facilities that are further from SSFL and designed to handle higher hazard waste (e.g., out-of-state disposal facilities for radioactive waste). Under the Cleanup to AOC LUT Values Alternative, a large percentage (79 percent) of the excavated soil exceeds LUT values (but not the risk-based standards) and these soils would be transported to facilities that are closer to SSFL. Therefore, the Cleanup to Revised LUT Values Alternative would produce greater peak annual miles travelled by haul trucks and corresponding higher air emissions (including CO2) compared to the Cleanup to AOC LUT Values Alternative. Chapter 2, Section 2.8.1.4 of this Final EIS was revised to explain the reason for the differences in annual greenhouse gas emissions among the alternatives.
- 64-18 The text of this Final EIS was revised to correct this error.
- 64-19 Chapter 3, Figure 3-13 of this Final EIS was revised to correct the noted inconsistencies.
- 64-20 The correct date for the decommissioning and decontamination of Building 4010 and the removal of radioactive material from the building is February 28, 1979 and is best referenced as Rockwell (Rockwell International), 1979, *S8ER Facilities Decommissioning*, February 28. This Final EIS includes text edited to reflect this change and the Rockwell International 1979 reference was added to the list of references and DOE's website, http://www.ssfareaiv.eis.com/ssf_areaiv_eis.aspx.
- 64-21 Chapter 11, Glossary, of this EIS, defines soil as "all unconsolidated materials above bedrock," which includes weathered bedrock.
- 64-22 Building 4100 and the adjacent B100 Trench are discussed in Appendix N of the document Group 5 – *Central Portion of Areas III and IV RCRA Facility Investigation Report, Santa Susana Field Laboratory, Ventura County, California* (CH2M Hill 2008).

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Department of Toxic Substances Control

22. **Section 4.4.3, Page 4-48, Pgph 3:** The text states *"The three groundwater remediation alternatives—Groundwater No Action, Groundwater Monitored Natural Attenuation, and Groundwater Treatment—would all positively affect the quality of groundwater resources."*

This statement may be the result of the standard language used in the Draft EIS, however, the determination that the No Action alternative has any effect, let alone a positive effect, is not supported. The statement should be modified.

23. **Section 4.11, Page 165, Pgph 2** -This paragraph fails to mention that DTSC would have discretion (in coordination with the SSFL Native American Council - NAC) over whether a listed or eligible resource would be handled under the exemption.

24. **Section 4.11, Page 165, Pgph 4** – Please indicate if all resources overlapping with clean up areas were tested such that eligibility for each listing could be determined.

25. **Section 4.11, Page 165, Pgph 5** – Please revise the text to include that NASA has determined this resource to constitute a Traditional Cultural Property (TCP).

26. **Section 4.11.1, Page 166, Table 4-75 (Archaeology Cleanup Alternatives)** - No historic properties affected for archaeology means that there will be no eligible or listed archaeological sites impacted whatsoever. The text should acknowledge that DTSC has discretion in applying the exemption. Also, the assertion that there will be no impacts to archaeological resources is contradicted in the TCP entries where it states there is potential discovery of unanticipated archaeological sites.

27. **Section 4.11.1.2, Page 167, Pgph 2** - According to records not all sites within clean up areas were subject to XP1 testing. Please confirm or correct.

28. **Section 4.11.1.2, Page 167, Pgph 4** – The text mischaracterizes the AOC, which allows DTSC, in coordination with the NAC, to exercise discretion. It is not a blanket exception. Please revise the text.

29. **Section 4.11.1.2, Page 167, Pgph 4** - Archaeological resources should be evaluated under more than just Criterion D especially in the context of a TCP. This evaluation of eligibility is insufficient for Section 106 and CEQA.

30. **Section 4.11.1.2, Page 167, Pgph 4** - This section (Cleanup to AOC LUT Values) fails to address archaeological resources discoveries. Please revise the text.

31. **Section 4.11.1.2, Page 168, Pgph 1** – The text infers that archaeological resources could be evaluated on information potential alone. This would be an error in approach. Please revise the text.

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64-23 DOE issues annual site environmental reports that can be found on the Energy Technology Engineering Center website at http://www.etc.energy.gov/Environmental_and_Health/Enviro_Monitoring.php. Additionally, Boeing, NASA, and DOE jointly issued an Offsite Data Evaluation Report in December of 2007 in which they evaluated the data collected from 18 field sampling and analysis events within 15 miles of SSFL over the past 60 years (MWH 2007). This reference is discussed in Section 2.7, "Offsite Impacts," of this CRD.

64-24 Chapter 3, Section 3.10.2, of this Final EIS was revised to reflect the correct regulatory status of RMHF and to correct the abbreviation for HWMF.

64-25 The rainfall season typically starts by mid-October and ends by mid-April, but there are variations in this pattern year to year. Chapters 3 and 4 of this Final EIS were revised to present a consistent discussion of the rainfall season.

64-26 As explained in Chapter 4, Sections 4.4.3.1, 4.4.3.2 and 4.4.3.3, there are some circumstances under which groundwater quality continues to improve under each alternative. For example, tritium will continue to decay (i.e., concentrations will continue to decrease) regardless of any actions taken. Under other instances, the source of contamination would need to be removed to improve the groundwater quality. Chapter 4, Section 4.4.3, of this Final EIS, includes revisions to more explicitly discuss how groundwater quality is impacted in each alternative.

64-27 As the commenter notes, determination of exemption areas will be coordinated through DTSC and consulting parties. The cultural resources sections in this Final EIS were revised to reflect this process. Please also see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process that was used to determine exemptions.

64-28 All sites overlapping with potential cleanup areas were tested to establish National Register of Historic Places (NRHP) eligibility. Ten sites were tested. The sites were chosen based on: the extent of the contamination known at the time the testing program was designed and consultation with the Sacred Sites Council. The Office of Historic Preservation and the SSFL Sacred Sites Council reviewed the testing program research design and approved it. This Final EIS clarifies the extent of testing.

64-29 This Final EIS was revised to clarify that NASA has determined that there is a traditional cultural property at SSFL, and to update the status of the NRHP nomination of the resource there.

Commenter No. 64 (cont'd): Mohsen Nazemi, Deputy Director,
Department of Toxic Substances Control

- 32. **Section 4.11.1.3, Page 168, Ppgh 2** – The text largely dismisses the potential for archaeological discoveries and follows with statement that "No historic properties would be affected". Provide explanation on how this is possible.
- 33. **Section 4.11.2.2, Page 170, Ppgh 3** - NEPA requires analysis of impacts to "cultural resources" whether they qualify as "historical properties" under the NHPA or not. The State Historic Preservation Officer's concurrence under 106 does not change this NEPA requirement.
- 34. **Section 4.11.2.2, Page 170, Ppgh 5** - Same as previous. Section is analyzing only impacts to "historic properties". This does not meet the NEPA requirement.
- 35. **Section 4.11.5, Page 174** - Which similar criteria for NEPA? NEPA requires consideration of "cultural resources" not limited to the NHPA.
- 36. **Section 4.11.5, Page 174** – The documents should acknowledge that resources may not be able to be avoided, both those we already know about and those that may be discovered. Coordination with the NAC will be of critical importance to address the issue.
- 37. **Table 6-1 Measures to Minimize Impacts of Demolition and Remediation Activities at Santa Susana Field Laboratory and the Northern Buffer Zone; Item 3-2.** *"The long-term groundwater monitoring program will be similar to the interim groundwater monitoring program now in place."*

 Although the DTSC does not currently anticipate extensive changes in the existing groundwater monitoring program, there will be modifications based on the final remedies selected for the site. The extent of these modifications is unknown and will be determined based on the long term data needs only after final groundwater remedies are selected.

"The site contractor will verify these actions to DTSC in semiannual groundwater monitoring reports submitted by DOE."

 The text needs to include a statement that although the current groundwater monitoring program requires semiannual groundwater monitoring reports, this can be modified as needed and directed by DTSC.
- 38. **Section 7.2.3, page 7-17; 1st Ppgh**: Text States: *"All the soil remediation action alternatives, the Building Removal Alternatives, and the Groundwater Treatment Alternative would require replacement of soil with backfill (including topsoil) obtained from offsite sources."*

 The text should specify if soil replacement would be necessary for the Groundwater Treatment Alternative. Appendix B states, *"There would be no soil disturbance from the installation of groundwater treatment systems. Treatment systems would be constructed primarily on existing concrete pads and asphalted"*

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- 64-30 As the commenter notes, determination of exemption areas will be coordinated through DTSC and consulting parties. The cultural resources sections in this Final EIS were revised to reflect this process. Please also see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process that will be used to determine exemptions. Because DOE cannot know if there will be inadvertent discoveries in cleanup areas, DOE cannot assert that there will be impacts. The text was clarified to indicate that impacts are possible to archaeological resources if it is necessary to cleanup a site to protect human health and the environment, or if previously unknown sites are located. The text was revised to more clearly differentiate between archaeological sites that are not eligible for listing on the NRHP and historic properties.
- 64-31 As noted in the response to comment 64-28, all sites overlapping with potential cleanup areas were tested to establish NRHP eligibility.
- 64-32 The determination of exemption areas will be coordinated through DTSC, which DOE has been coordinating with on this matter since 2012, and the other consulting parties. The cultural resources sections in this Final EIS (Sections 3.11 and 4.11) were revised to reflect this process. Please also see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process that will be used to determine exemptions.
- 64-33 The text in this Final EIS was revised to note the other NRHP eligibility criteria. Please refer to Appendix B, Section B.11, Environmental Consequences Methodology, for a discussion of cultural resources analysis methods.
- 64-34 The commenter is correct that Chapter 4, Section 4.11.1.2 of the Draft EIS did not specifically discuss inadvertent finding of archaeological resources during cleanup. Therefore, Sections 4.11.1.2, 4.11.1.3, and 4.11.1.4 of this Final EIS were revised to address inadvertent discovery of cultural resources during cleanup activities.
- 64-35 This wording may have been ambiguous. The text of Chapter 4, Section 4.11.1.2, of this Final EIS was clarified to remove the ambiguity.
- 64-36 The text in this Final EIS was revised to indicate that impacts on archaeological resources could occur if previously unknown sites were located, and to differentiate between archaeological sites that are not eligible for listing on the NRHP and historic properties.
- 64-37 DOE addressed impacts on historic properties (as defined by NHPA) and cultural resources (as intended in NEPA); the SHPO determination was just part of the impact analysis. Chapter 3, Section 3.11 defines cultural resources for the purposes of this

Commenter No. 64 (cont'd): Mohsen Nazemi, Deputy Director,
Department of Toxic Substances Control

ground. Any required piping (for groundwater or pressurized air) would be above ground."

64-40
cont'd

39. **B.2.3.2 Methods Used to Analyze and Quantify Impact; B-8; Pgph 14:** The text states, "There would be no high-pressure injection of treated groundwater or groundwater amendments."

64-41

All groundwater remediation technologies need to be evaluated in the Corrective Measures Study, therefore this statement should be removed.

40. **B.2.3.2 Methods Used to Analyze and Quantify Impact; B-9; 1st Pgph:** The text states, "The soil immediately above the strontium-90-impacted sandstone would be removed, stockpiled, and replaced as backfill after the contaminated sandstone is removed."

64-42

The basis for determining that the excavated soil will be consistent as backfill under the AOC needs to be provided.

41. **Page C1-9.** The following is stated in the table, "Install long-term monitoring wells, including at the base of the Santa Susana Mountains where they intersect with the Simi Valley alluvium to detect migration of contaminants." Should this state "at the base of Simi Hills" instead of "Santa Susana Mountain"?

64-43

42. **Table D-3, Page D-12:** Footnote 5 of this table states, "For locations where TPH is the sole constituent, a cleanup strategy will be considered based on the findings of a soil treatability study, and the soil will be cleaned to the 5 milligrams per kilogram LUT value". Based on findings of the Soil Treatability Studies, it was concluded that TPH analytical limitations plus the presence of naturally occurring organic materials at the LUT level (5 mg/kg) may make cleanup to this level very difficult. Biotreatment to accelerate natural degradation of these constituents may prove useful, however DTSC retains authority and jurisdiction to direct additional actions over any areas where monitored natural attenuation or biotreatment is part of the proposed remedy. DTSC will consider the cleanup actions ability to achieve the cleanup values and timeliness to complete cleanup when evaluating cleanup methods.

64-44

43. **Section D.6.1, Page D-37:** The past paragraph indicates that commercial laboratories have indicated to DOE that they could meet USEPA Laboratory A MDCs, but would have difficulty achieving Lab B MDCs. While no documentation is cited, it is noted that Laboratory B MDCs are an analytical target, and USEPA recommended a process for procuring analytical laboratories that includes a rigorous demonstration for achieving measurement quality objectives and programmatic needs (HGL, 2012).

64-45

44. **RMHF Leach Field Bedrock Excavation, page D-82:** There is no mention of using overburden soil as backfill as stated previously in the document. This should be addressed in the document.

64-46

Final EIS; Appendix B, Section B.11 explains in detail the methodology employed in analyzing environmental consequences for cultural resources, including determination of impact thresholds (an adverse effect on a resource that alters the historical/cultural significance of the resource) for both historic properties (including traditional cultural properties) as defined in 36 CFR 800.16(l), as well as cultural resources that may not be eligible for listing on the NRHP, and sacred sites.

64-38 Chapter 4, Section 4.11.6, of this EIS states that the impact threshold may be met, resulting in potential adverse impacts. It also specifies that if mitigation is required, it would be determined through consultation and agreement with the State Historic Preservation Officer, the Santa Ynez Band of Chumash Indians and non-federally recognized tribes. Mitigation requirements will be further described in the Programmatic Agreement developed under consultation with these parties.

64-39 Chapter 6, Table 6-1 of this Final EIS includes revised text indicating that the frequency of the groundwater monitoring reports may be modified as needed by DTSC.

64-40 As described in Chapter 4, Section 4.4.3.3 of this Final EIS, removal of the subsurface bedrock impacted by strontium-90 is one treatment technology considered in this EIS for the Groundwater Treatment Alternative. If this treatment technology is chosen and implemented, the resulting excavation would need to be backfilled. For purposes of analysis in this EIS, DOE has estimated that 2,300 cubic yards of backfill soil would be needed to fill this excavation.

64-41 Appendix B, Section B.2.3.2 of this Final EIS was revised to remove the statement that there would be no high-pressure injection of treated groundwater or groundwater amendments.

64-42 The basis for determining acceptability of the backfill soil at the Sr-90 location would be the same as the basis for all other backfill soil (Confirmation Protocol section of the AOC).

64-43 The Table in Attachment C1 is a tabulation of the alternative concepts developed by those attending the Alternatives Development Workshop. DOE's intent is to present the information as it was developed and provided by workshop participants; however, to clarify the assumed intent, Simi Hills was added in brackets. Note that DOE's current plans do not include installation of wells at the base of the Simi Hills. As shown in Chapter 2, Figure 2-11 of this Final EIS, groundwater within the scope of DOE's cleanup responsibilities that exceeds drinking water limits remains in Area IV and the NBZ. Groundwater monitoring wells outside of Area IV and the NBZ would be considered if future monitoring data indicates groundwater with concentrations exceeding action criteria is moving off site.

Commenter No. 64 (cont'd): Mohsen Nazemi, Deputy Director,
Department of Toxic Substances Control

- 64-44 DOE recognizes DTSC's authority under the 2010 AOC for the TPH matter. DOE encourages DTSC to review the TPH criterion and consider the soil data to adjust the LUT value for TPH. Natural attenuation is not necessary for locations where the TPH source is decaying organic matter. The issue is not facilitating degradation of soil contaminants, the issue is with LUT values that reflect actual contamination and are set at concentrations the can be achieved using methods such as bioaugmentation.
- 64-45 In July 2012, DOE submitted to 17 radioanalytical laboratories, a request for information regarding normal and enhanced minimum detectable concentrations (MDCs) for 15 radionuclides. These were the radionuclides reported by EPA to exceed their field action levels (also termed trigger levels) as a result of its study of Area IV. Responses were received from 14 radioanalytical laboratories. The results were compared to the surface background values and to the EPA trigger levels. The evaluation was documented in a Technical Memorandum *Summary of Responses to DOE's Request for Information from Laboratories Regarding Detection Limits* (Rucker 2012). Even Laboratory B was unwilling to commit to MDCs that would meet the Laboratory B-based LUT values, even under enhanced request conditions that would cost extra.
- 64-46 Chapter 4, Section 4.4.3.3, of this Final EIS has been revised to note that existing overburden could be used to partially backfill the excavated bedrock if the existing overburden could meet the AOC LUT values. Additional fill would be required to bring the excavation back to grade, assuming that this material would meet 2010 AOC LUT values. Appendix D, Section D.6.5 of the EIS provides additional details regarding the bedrock removal action.

Commenter No. 65: Bruce M. Rowe,
Professor Emeritus of Anthropology, Los Angeles Pierce College

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: DOE DEIS

I believe that the Santa Susana Field Lab should be cleaned up based on a scientifically determined risk based standard. I am not familiar with any convincing epidemiological evidence of current off-site risk from the site. Some residents of the areas surrounding the site see their cancers or the cancers of family members or other residents of their neighborhood as evidence of cancer clusters. Some also believe that the cancers were caused or might have been caused by pollution from the SSFL site. Those beliefs are not currently supported by scientific evidence. Many of the reported cancers are known to be or suspected to be primarily the result of genetic factors and others could have a variety of environmental triggers, such as general air pollution, household pollution due to the use of carcinogenic chemicals such as household cleaning products, insecticides, herbicides, formaldehyde, and hundreds of other chemicals that one might come into contact with over time. Naturally occurring radon is also a potential carcinogen present in much of the area within a ten-mile radius of the SSFL.

The **belief** that a specific cancer is caused by pollution originating at the SSFL is **not evidence that it was the cause** of that specific cancer. Cause and effect is very difficult to prove scientifically in an illness such as cancer. Many possible variables could be involved with the origin of a specific cancer. Individual stories (anecdotes) can be used to generate hypotheses that might be able to be tested scientifically. However, with so many types of cancers and other illnesses being suspected by residents living both near and not so near to the SSFL, it is hard or impossible to control the variables. People with the cancers have been in the area for varying amounts of time. Whether they were or were not exposed to a carcinogen from the SSFL might be impossible to determine. And if they were exposed, the degree of and dosage from any exposure is impossible to know.

What we do know is that once someone believes something strongly, it is difficult for that person to alter their opinion even when evidence is presented that clearly places doubt on their beliefs. There are many psychological factors at work. One is called confirmational bias. This is the behavior of automatically rejecting any evidence that contradicts a belief and automatically accepting information that reinforces the belief, no matter how illogical or unscientific that evidence might be. Advocates, activists, and politicians who lead movements can and often do use their standing in society to keep that bias active. Some of these people create a false belief in their competence or

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DOE acknowledges your support for a scientifically determined risk-based standard for cleanup at SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

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Thank you for your comment. Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 65 (cont'd): Bruce M. Rowe,
Professor Emeritus of Anthropology, Los Angeles Pierce College

qualifications to make scientific and other types of conclusions. This is very true among the proponents for the strictest possible cleanup of the SSFL.

The cleanup at the SSFL should be risk based and that risk should calculate the possible risk from the cleanup itself. That is, what risks to health and to the physical and cultural environment will the cleanup present. In terms of health, the question should be asked: Will a certain level of cleanup potentially cause more health problems than it would eliminate? For instance, would the removal and transportation of close to one million cubic yards of soil, and that is from the DOE site only, create an offsite risk of exposure greater than not removing that amount of soil? Digging up soil in which low level pollutants are locked in place in the soil and then the cleanup making them friable could release them into the air where they could travel a great distance. The health risk could be greater and to a larger population than leaving them in place or remediating them in place in a way that does not create a potential problem. Transporting such soil also has numerous risks, such as spills. Those risks increase with higher level pollutants, which should be removed from the site, but under strict safety protocols. Along are we not just shifting the risk from one community to the community where the soil is being taken?

The end use of the site needs to be considered. For instance, if the end use of the site is not going to be agricultural, then why should the site be cleaned up to an agricultural or higher standard? And if it is determine through scientific studies that there is no chance of any remaining pollutants affecting off site agricultural areas at levels that are dangerous to human health, again why should the site be cleaned up to an agricultural or higher standard?

If the site is cleaned up to the highest standard, the cost to the physical environment and the cultural resources at the site could be cataclysmic. And this disruption might have been done while yielding no public health benefits at all. In fact, the destruction of a valuable wildlife corridor, watershed, living space and breeding ground for a wide variety of animals and plants, could have a negative effect on the "health" of the ecosystem which could affect human well-being both in the short and long term.

The effect on the cultural resources of this area, which has been an area of human activities for thousands of years, could be significant and of course irreversible. Your document lists the known archeological sites on the property. It is highly probable that there are numerous undiscovered sites. Even if the known sites are protected during the cleanup, it is reasonable to predict that some—perhaps many, undiscovered sites will be destroyed. Also, destroyed would be the cultural context potentially provided by those unknown sites, once they had been discovered and analyzed. The strictest cleanup could remove information important to the understanding of the prehistory of the area and information important to the self-esteem and other factors related to the social and psychological well-being of current native peoples. And again, this loss could be done with no known benefit to public health.

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- 65-3 DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities regardless of which alternative is selected. By evaluating a range of reasonable alternatives for remediation of the soil in Area IV and the NBZ, DOE is providing data so that the public and the decision-maker can make a comparative evaluation of the positive and negative impacts of different cleanup levels.
- 65-4 As discussed in Chapter 3, Section 3.10.3 of this Final EIS, waste would be disposed of in offsite facilities, including nonhazardous waste landfills, hazardous waste landfills, and LLW and MLLW disposal facilities. Some nonhazardous material may be sent to appropriate recycling facilities. The hazardous waste landfills and LLW and MLLW disposal facilities are specifically engineered to permanently retain the waste and prevent exposure of the surrounding community to hazardous materials. Each facility has waste acceptance criteria (WAC) that ensure meeting this objective. The removed soils will be characterized to make sure they meet the WAC. This contextual information has been added to Section 3.10.3 of this Final EIS.
- 65-5 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. At a minimum, DOE soil cleanup would remove soil contaminants to concentrations safe for future use of Area IV as open space.
- 65-6 DOE recognizes the breadth of resource values in Area IV and the NBZ; this recognition is reflected in the range of alternatives DOE developed and analyzed, which allows a comparison of impacts among the various resource areas, including cultural resources.
- 65-7 As stated in Chapter 3, Section 3.1.1.1, of this EIS, SSFL provides a valuable wildlife corridor and discussed in the Environmental Consequences under Recreation "SSFL sits within a rare and vital wildlife corridor connecting the Sierra Madre Ranges of the Los Padres National Forest to the Santa Monica Mountains and the Pacific Ocean. Termed the Santa Monica - Sierra Madre Connection and comprising approximately 125,000 acres, the corridor consists of sandstone cliffs, oak woodlands, and scrub and meadows, with valley and mountain vistas. Several formally designated open space areas are located within close proximity to SSFL and are a part of this unique corridor" and

Commenter No. 65 (cont'd): Bruce M. Rowe,
Professor Emeritus of Anthropology, Los Angeles Pierce College

So, I ask you to consider your actions wisely and carefully, balance the pros and cons of each action that you take in terms of their short and long term effects.

Sincerely,
Bruce M. Rowe
Professor Emeritus of Anthropology
Los Angeles Pierce College
April 12, 2017

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as stated in Chapter 3, Section 3.5.1, of this EIS “The SSFL site is located along the crest of the Simi Hills and is a part of the linkage design (South Coast Wildlands 2008) or wildlife corridor that provides wildlife passage from the Santa Monica Mountains to the south through the Simi Hills and Santa Susana Mountains to the Sierra Madre range to the north (Penrod et al. 2006). Mammals such as bobcat, coyote, mountain lion, and deer pass through the open space areas of SSFL.” Text has been added that discusses the potential impacts to the valuable wildlife corridor, watershed, living space and breeding ground for a wide variety of animals and plants, and effect on the “health” of the ecosystem. The ability of Area IV and NBZ to serve as important habitat for wildlife will remain and the cleanup activity will be implemented in a manner that will reduce impacts to biological resources and maintain the health of the ecosystem, while remaining safe for humans.

65-8 DOE acknowledges your comment.

**Commenter No. 66: Peter Zorba, NASA Project Director,
National Aeronautics and Space Administration**

National Aeronautics and Space Administration
George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



April 12, 2017

Reply to Airtel of: AS01

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

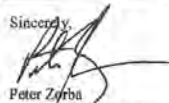
Re: NASA Comments on the Department of Energy Santa Susana Field Laboratory Area IV Draft
Environmental Impact Statement

Dear Ms. Jennings,

Thank you for the opportunity to review and comment on the Department of Energy's Draft
Environmental Impact Statement for "Remediation of Area IV and the Northern Buffer Zone of the
Santa Susana Field Laboratory." Enclosed is a comment matrix that lists the National Aeronautics
and Space Administration's comments.

If you have any questions regarding our comments, please contact me at [REDACTED] or

Sincerely,


Peter Zorba
NASA Project Director
Santa Susana Field Laboratory

Enclosure

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**Commenter No. 66 (cont'd): Peter Zorba, NASA Project Director,
National Aeronautics and Space Administration**

NASA Comments on DOE SSFL EIS

Official NASA Comments on DOE SSFL EIS						
Number	Page Number	Section/Figure	Location	Commenter	Resource/Location	Comment
1	S-2	S.2		NASA	Summary Document	The proposed activities may be more acceptable to involved stakeholders if there was reference to past activities (taking responsibility), and the suggestion that DOE is cleaning up not only because it's required but also because it's the "right thing" to do.
2	S-6	S.4	Paragraph 2	NASA	Summary Document	When discussing DOE activities in locations other than Area IV, please add a reference that NASA is not responsible for any radiological contamination, either in the NBZ or elsewhere onsite.
3	S-19	S.19.2.2	1st paragraph (under table)	NASA	Summary Document	It would be good to describe more about MNA and also provide context on health and safety rationale for why it was selected, i.e., weighed pros and cons of treatment vs MNA and more aggressive treatment.
4	S-21	S.19.2.2	Paragraph 2	NASA	Summary Document	Again, some context as to what MNA means in terms of health and safety would have been useful from a public risk perception perspective.
5	S-29	S.19.2.2	Paragraph 4	NASA	Summary Document	Under "Range of Alternatives" it may be good to reiterate that a No Action alternative analysis is required by NEPA (even though it may not be "reasonable"). DOE may want to limit its action requirements to areas impacted by their operations. NASA characterized portions of the NBZ where a release occurred from operations that were performed within Area II and would have migrated into the NBZ which is primarily in the drainage ways. These areas are shown in the Soil Data Summary Report (SDSR) as Estimated Remediation Areas (ERAs). Also, due to the low values for some constituents in the Look-up Table, NASA extended some of the ERAs and show them as Extended Remediation Areas in the DSR.
6	1-1	1.1		NASA	Section 1	It is NASA's understanding that there is backfill available that meets LUT requirements. However, this fill would not be suitable for use as top soil, as it is expected to be essentially sterile and would require soil amendments that could exceed LUT requirements.
7	2-1	2.1		NASA	Section 1	It is unclear how certain DOE is that the "Approximately 833,000 cubic yards of soil", represents a known quantity. Is this a median or the extent of a range? It is NASA's understanding that a cleanup to AOC LUT levels would generate significant volumes of AOC impacted soil.
8	2-17	2.3.2		NASA	Section 2	In the description of SVE, DOE refers to bedrock (above water level) as containing VOCs. NASA conducted a study on Bedrock Vapor Extraction (BVE). Suggest that BVE be discussed here too and reference NASA study here (or elsewhere that's appropriate).
9	2-63	2.6.3		NASA	Section 2	In Archaeological Resources, suggest deleting "from impacts (i.e. adverse effects)". The 2014 PA intends to minimize impacts, but it does not protect resources from impacts. It would be clearer to simply state the sites "would be protected".
10	2-123	Table		NASA	Section 2	

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66-1 The Summary, Section S.2, of this EIS, correctly addresses the purpose and need for DOE to take action to remediate its portion of SSFL. It notes that the cleanup is to be protective of the environment and the health and safety of the public and workers. The prior section, Section S.1, acknowledges that there are residual chemicals and radionuclides from historical operations in Area IV.

66-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In accordance with this requirement, DOE is evaluating its proposed activities for remediation of SSFL Area IV and the NBZ in this Final EIS. Remediation of the entirety of SSFL is being performed as required by the August 16, 2007, Administrative Order for Corrective Action (CO) signed by DTSC, Boeing, NASA, and DOE. (The requirements in the 2010 AOC signed by DTSC and DOE supersede the 2007 CO for soils.) These parties have taken responsibility for remediation of areas in which they conducted operations or in which their activities may have contributed to contamination. As indicated in Chapter 1, Section 1.3, of this EIS, DOE shares responsibility with NASA for cleanup of soils in the NBZ; NASA is responsible for cleanup of contamination in the NBZ that emanates for areas that it administers. DOE also shares responsibility with Boeing for groundwater remediation in Area IV and the NBZ, as defined in the 2007 CO. Consistent with Section 1.7 of the 2007 CO, responsibility for cleanup does not admit fact, fault, or liability for any contamination. Therefore, addition of the requested disclaimer is not necessary, nor is it within DOE's purview to make such a statement.

66-3 In this Final EIS, the use of Monitored Natural Attenuation for low concentration TPHs in soil is included in all of the soil remediation Action Alternatives. Based on soil treatability studies, it was concluded that some of the soil characterized as exceeding TPH contains naturally occurring organic material and that accurately detecting TPHs at low concentrations is problematic. Both of these factors make concentrations of TPH appear higher than those attributable to petroleum-based origins (Nelson 2015d; DTSC 2018). Soil treatability studies also concluded that natural attenuation will be able to reduce TPH concentrations adequately given sufficient time (it would take an estimated 70 years for concentrations to degrade below the AOC LUT values) (CDM Smith 2015b; Nelson 2015a) Chapter 2, Section 2.3.2, of this EIS provides information on the use of MNA as a treatment option. In the various resource impact analyses presented in Chapter 4 of this Final EIS, DOE has provided additional details on the implementation and potential future risks that MNA would pose to the community. Chapter 2, Table 2-9, of this Final EIS, allows a comparison among the impacts of the Soil Remediation Alternatives. Since MNA is included in all of the Soil Remediation Action Alternatives, the impact to human health is included in the

**Commenter No. 66 (cont'd): Peter Zorba, NASA Project Director,
National Aeronautics and Space Administration**

NASA Comments on DOE SSFL EIS

Page Number	Section/ Figure	Location	Commenter	Resource/ Location	Comment
11	3-77	3.6.1.2	Full Paragraph	NASA	Air Quality DOE indicates that "winds at SSFL prevail from the northwest and southeast quadrants". This differs from NASA's wind rose, which suggested that the majority of winds blow from the southwest. This difference is likely due to DOE and NASA using two different locations for collecting meteorological data. However, this difference may cause public concern as it offers a different perspective on where air pollutant concentrations may be dispersed from the site.
12	3-103	3.9.2	Second Paragraph	NASA	H&S There seems to be some detail missing here. Who consults "a person visiting Area IV" and what is the expected length of stay? Seems subjective to state their radiation exposure would be 1/2 of a worker, without providing the detail. Perhaps at a minimum a reference to appendix G can be made.
13	3-136	3.11.2.3.2 Table 3-51 and App F		NASA	cultural Please include NASA 2015 and 2016 archaeological studies in this discussion.
14	3-141	3.11.2.3.4		NASA	cultural TCP - Please include a statement that NASA and DOE partnered on an ethnographic study which will be used on the basis for nomination of the TCP and that NASA is coordinating with DOE to evaluate and define an eligible archaeological district.
15	4-45	4.3.5	Second paragraph; third sentence (starting with "Under the Soil No Action...")	NASA	Surface Water Clarify why this is different from the soil remediation alternatives: assume it's because of the "additional mitigation measures that would 'heavily forestall this risk.'"
16	4-59	4.5.1.2.1		NASA	Biology Are there any potential adverse impacts to recognized wildlife migration corridors? What about increased traffic within these corridors?
17	4-59	4.5.1.2.1		NASA	Biology Vegetation and Wildlife Habitat and Biota (LUT Clean up): There seems to be a lack of discussion of the effects of radiological and chemical contamination on wildlife. NASA considered this, showing some benefit to predators; however, this benefit did not weigh the benefit of clean up.
18	4-61	4.5.1.2.2		NASA	Biology Aquatic and Wetland Habitat and Biota: There is a reference to potential compensatory mitigation, based on CWA, but there is no discussion of any other CWA permit requirements. Please explain the DWA consultation that has occurred to date. Will a 404 permit be required, and if so, is there an understanding of the level of permit (NWP vs. SP)?
19	5-4	Table 5-1		NASA	Cumulative Under "Backfill for Building Removal", please confirm that the quantity is not included as part of the soil back fill. If so, please restate the "Net Provider" as appropriate. As currently written, it implies NASA was planning to share information.
20	5-4	Table 5-1		NASA	Cumulative In areas that state "not provided" for bed rock removal, please restate to "not applicable". These numbers were not provided, because NASA is not removing bedrock and were not relevant.
21	5-4	Table 5-1		NASA	Cumulative It would be beneficial to define the unit of measure in the "Total" row.
22	5-11	5.5.2		NASA	Cumulative (Geology) Please add a statement in this section that explains NASA's SRPs to mitigate erosion of soils on slopes. This comment applies throughout the section. Please be sure to reference NASA's efforts to mitigate impacts where applicable.
23	5-14	5.5.5 and Table 5-2		NASA	Cumulative (Biology) Please reference the fact that NASA is also working on appropriate exemption areas, which would reduce the impact to sensitive areas. Also, please mention, NASA has agreed to mitigation measures which would reduce impacts to defined sensitive areas and Oak habitat.

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overall impact from each alternative. The human health impacts associated the low concentration TPH soil would be a fraction of the impacts of each alternative. A separate analysis of the impacts associated with actively removing low concentration TPH soils was not performed.

66-4 The purpose of the paragraph is to demonstrate DOE's responsibility for evaluating other action alternatives beyond the Cleanup to AOC LUT Values Alternative. Although the No Action Alternative is in the range of alternatives, the intent of the discussion is directed towards the range of reasonable action alternatives that should be included in this EIS.

66-5 The commenter is correct that there are areas of the NBZ for which DOE is not responsible. This is made clear in other sections of this Final EIS. For example, Chapter 1, Section 1.0 states that the NBZ is included to ensure that any soil contamination contiguous to and emanating from Area IV is evaluated in this EIS. Further, Section 1.3 states that DOE shares responsibility with NASA for cleanup of soil in the NBZ and that NASA is responsible for cleanup of contamination in the NBZ that emanates from areas that it administers.

66-6 As NASA has indicated, the results of soil tests from multiple possible offsite backfill locations in the region found that materials at these sites are predominantly a sand-and-gravel mixture with no materials capable of restoring excavated areas at SSFL to pre-cleanup conditions (NASA 2017). DOE agrees that such backfill would not support native plant growth without amendment. As described in Chapter 2, Section 2.3.3, of this EIS, DOE is also aware that amended backfill soil would likely not meet all 2010 AOC LUT limits as all soil amendments tested by DOE did not meet these limits. As described in Section 2.4 of this EIS, under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resource Alternative backfill soils that meet the higher soil contaminant concentration limits (revised LUT values and risk-based limits, respectively) should be easier to locate. But even with the limits of these revised soil concentration values, backfill soil should still have similar physical, chemical, and microbial characteristics, preferably without the use of soil amendments, that could support re-establishment of native vegetation.

66-7 The 881,000 cubic yard volume (the estimate was revised for in the Final EIS) is based on GIS (geographic information system) determinations of contamination above 2010 AOC LUT values as described in Chapter 2, Section 2.3.2 and Appendix D of this EIS. This volume includes assumed reductions for biology/cultural exemptions and monitored natural attenuation of TPH in soils. DOE's estimated total volume that does not include the reductions through the application of exemptions and TPH attenuation

**Commenter No. 66 (cont'd): Peter Zorba, NASA Project Director,
National Aeronautics and Space Administration**

NASA Comments on DOE SSFL EIS

Number	Page Number	Section/ Figure	Location	Commenter	Resource/ Location	Comment
24	5-18	5.5.5		NASA	Cumulative (Biology)	Discussion of regional movement of wildlife was not included in the Environmental Consequences section. If this is a viable impact, it should be first explained in Section 4.0, new impacts should not be introduced in Cumulative Impacts. Furthermore, there is no specific discussion of mountain loon, bobcat and raptal in Section 4.
25	5-18	5.5.5		NASA	Cumulative (Biology)	There seems to be a disconnect between the cumulative impact section, and the Section 4.0 Biology Section (note detailed discussion of SSTEP). This cumulative analysis shows a much more species specific approach, where Section 4.0 was higher level. The level of analysis should be consistent between the sections.
26	5-18	5.5.5		NASA	Cumulative (Biology)	NASA has also identified mitigation measures to protect biological resources. They should be referenced here as well. Specifically, NASA has a Biological Opinion and a ROD that include mitigation and SMPs for roo management, revegetation, threatened and endangered species management, and seed mix.
27	5-18	5.5.6		NASA	Cumulative (Air quality)	This current language is confusing and should be revised. The wind rose direction is somewhat subjective. NASA used multiple wind rose scenarios in its analysis. Please remove the following sentence "The wind direction would result in the shortest transport distance of cumulative cleanup emission to the SSFL fence line (about 3,300 feet from the NASA source in Area II) to the fence (in) and, therefore, potentially the highest offsite pollutant impacts of any wind direction". As it implies that this is a known fact, but NASA does not agree. Also it is not warranted in a cumulative impact analysis, which should focus more on the potential combined impacts with DOE actions, not just the impacts from other agencies.
28	5-21	5.5.7		NASA	Cumulative (Noise)	In paragraph 2, please clarify that truck trips are limited to 96 PER DAY. Also again in the second to last sentence.
29	5-24	5.5.8.1		NASA	(Transportation)	Table 5-8: NASA did not calculate a corresponding number of transportation fatalities. The number in the table is a DOE number attributed to NASA. Please make sure that is made clear.
30	5-25	5.5.8.2		NASA	(Transportation)	NASA did not calculate ESALs. The number of ESALs seems to be a DOE number attributed to NASA. Please make sure that is made clear.
31	5-25	5.5.8.2		NASA	(Transportation)	Pavement Deterioration: please give temporal time frame for "truck shipments" in the first sentences.
32	5-27	5.5.9		NASA	(Health)	Human Health: Please clarify that there is no potential radiation exposure from NASA activities.
33	5-31	5.5.11.2		NASA	Cumulative (Cultural)	"Of particular note are those structures that lie in one of NASA's three historic districts (the A1b, Bravo, and Coca Test Areas). NASA proposes to preserve one or more NRHP-eligible structures, but demolition of other selected structures could have an adverse impact on the NRHP-listed or eligible built environment and would contribute to the cumulative effect on this resource type in the vicinity of SSFL." Please delete these sentences. These resources are unique to NASA and impacts to them do not represent a cumulative concern, as DOE actions would not effect these resources.
34	5-31	5.5.11.1		NASA	Cumulative (Cultural)	It is unclear how this analysis explains the cumulative impact. It appears to be the impact from DOE activities only. In order for there to be a cumulative effect the DOE activity would need to combine with one of the other cumulative activities.
35	5-35	5.5.13		NASA	Cumulative (EJ)	Paragraph 4: Please clarify that there is no potential radiation exposure from NASA activities.

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is 1,616,000 cubic yards. All of the estimates in this EIS include significant uncertainty, with a range of -30/+20 percent applicable to each estimates.

66-8 For the fractured bedrock conditions tested by NASA, NASA was able to remove 30 pounds of TCE In assessing the groundwater treatment options in this Final EIS, the findings of the Results from Bravo Bedrock Vapor Extraction Treatability Study (CH2M Hill 2015) were considered. However, the discussion of the groundwater treatment options, including soil vapor extraction, is based on the *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) which was completed after the issuance of the Draft EIS. The text of this Final EIS, Chapter 2, Section 2.6.3, was revised to incorporate the findings of the remedy evaluations.

66-9 The text in Chapter 2, Table 2-12, in the section titled "NASA and Boeing Contribution to Cumulative Impacts," was revised as suggested.

66-10 The commenter is correct that the differences in winds recorded by DOE and NASA are due to the recording of winds in different locations within SSFL. Chapter 3, Section 3.6.1.2.1, of this EIS identifies that the larger-scale regional winds prevail from the westerly direction and the wind directions within Area IV, as presented in the Area IV wind rose, are influenced by the local terrain. This is also the case for the winds recorded by NASA in Areas I and II, where the elevated terrain to the south deflects the prevailing winds, resulting in more winds from the southwest direction. In response to this comment, the term "SSFL" was replaced with "Area IV" in the last two sentences of the referenced paragraph in this Final EIS.

66-11 The text states, "a site visitor's exposure to chemicals or radionuclides at Area IV and the NBZ would be much less than that of an Area IV and/or NBZ worker" and "the radiation dose to a site visitor would be less than the 1 millirem per year that has been reported for workers in recent years." While there is no mention of a factor of 1/2, the actual fraction for the potential dose would be proportional to the amount of time a visitor remains onsite and would depend on where onsite they are. In Chapter 4, Section 4.9, parameters for the modeling of an onsite recreational user were also used as a conservatively high estimate of potential impacts to a site visitor because a site visitor's exposure time would likely be much less than that assumed for the recreational user. The recreational user was assumed to be exposed 8 hours a day, 75 days per year, for 30 years.

66-12 Chapter 3, Section 3.11.2.3.2 and Table 3-33, and Appendix F, of this Final EIS, were revised to reflect NASA's 2015, 2016, and 2017 archaeological studies, as appropriate.

Section 3 – Public Comments and DOE Responses

Commenter No. 66 (cont'd): Peter Zorba, NASA Project Director,
National Aeronautics and Space Administration

NASA Comments on DOE SSFL EIS

Number	Page Number	Section/ Figure	Location	Commenter	Resource/ Location	Comment
36	6-2	6.2		NASA	Mitigation	Please reference NASA's existing BO with USFWS and explain that the new BA does not affect this BO
37	6-17	Table 6-2 (BQ-1)		NASA	Mitigation	Please clarify that the USFWS BO for the site-wide BA will only affect DOE's interests at SSFL
38	6-14	References		NASA	cultural	NASA FORM from 2010 cited. Need to update ICMRP data. [These are references just for Chapter B.] cultural NASA to provide a copy
END						

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- 66-13 Chapter 3, Section 3.11.2.3.4, of this Final EIS, was revised as suggested, to discuss the ethnographic study, and the partnership between DOE and NASA for the ethnographic study, the Traditional Cultural Property nomination and the archaeological district.
- 66-14 The text in Chapter 4, Section 4.3.5, of this Final EIS, was expanded to clarify that under the Soil No Action Alternative, the existing NPDES control structures would remain in place, but no additional soil removal/remediation actions would be completed. The text was added to further support the conclusion that contaminant discharge could occur in storm events that exceed the capacity of the control structures, given the absence of additional soil removal/remediation work under the Soil No Action Alternative. This is in contrast to implementation of soil removal/remediation actions and mitigation actions under the action alternatives that would remove contaminants and avoid exceedances of NPDES limits.
- 66-15 Text was added to Chapter 4, Section 4.5.1.2.1, of this Final EIS that discusses the potential impacts to wildlife migration corridors and the effects of increased traffic within these corridors.
- 66-16 The EIS was revised to reflect cleanup levels for the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative that are based on human risk as well as ecological risk. Inclusion of this analysis provides for a more quantitative analysis of ecological risk receptors under the alternatives. DOE remains committed to a cleanup of contamination in Area IV and the NBZ of the SSFL. The cleanup meets the purpose and need to be protective of the environment and the health and safety of the public and workers. Cleanup activities will be performed in a way that will minimize impacts to biological resources while ensuring all cleanup requirements are met and most importantly that the site is safe for humans.
- 66-17 Appendix I of the EIS provides the Wetland Assessment, which has further information on the regulatory requirements and results of jurisdictional determination surveys conducted in Area IV and the NBZ. To date no permit applications have been submitted.
- 66-18 Chapter 5, Table 5-1, of this Final EIS, was revised to change “Not Provided” to “Not Applicable” for the “Area Disturbed for Building Removal” and “Backfill for Building Removal” entries because those values are included in the total volume of disturbed soil removal and backfill emplaced as a result of NASA buildings being primarily located within their soil remediation areas.
- 66-19 Chapter 5, Table 5-1, of this Final EIS was revised to clarify that NASA does not expect to perform any bedrock removal.

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- 66-20** The unit of measure is listed for each group for which a total is provided in Table 5-1. Therefore, no change to this Final EIS was made.
- 66-21** Chapter 5, Section 5.5.2, of the Draft EIS includes a statement that best management practices would be used to slow the flow of runoff and decrease soil erosion. Therefore, no change to this Final EIS was made.
- 66-22** Reference to NASAs AOC, which has similar requirements as DOE in regards to include appropriate exemption areas, was incorporated into the text. NASA's EIS is also referenced.
- 66-23** Chapter 3, Section 3.1.1.1 of the Draft EIS stated: "SSFL sits within a rare and vital wildlife corridor connecting the Sierra Madre Ranges of the Los Padres National Forest to the Santa Monica Mountains and the Pacific Ocean. Termed the Santa Monica - Sierra Madre Connection and comprising approximately 125,000 acres, the corridor consists of sandstone cliffs, oak woodlands, and scrub and meadows, with valley and mountain vistas. Several formally designated open space areas are located within close proximity to SSFL and are a part of this unique corridor. Figure 3-2, the Ventura County land use map, illustrates the location of these open space areas in proximity to SSFL." In addition, wildlife corridors are discussed in Section 3.5.1 of the EIS: "The SSFL site is located along the crest of the Simi Hills and is a part of the linkage design (South Coast Wildlands 2008) or wildlife corridor that provides wildlife passage from the Santa Monica Mountains to the south through the Simi Hills and Santa Susana Mountains to the Sierra Madre range to the north (Penrod et al. 2006). Mammals such as bobcat, coyote, mountain lion, and deer pass through the open space areas of SSFL." Impacts, described in general as limited, are discussed in Chapter 4, Section 4.5.1.
- 66-24** Because the cumulative impacts section covers a larger area that includes multiple projects and the potential effect to many other species, there is additional discussion about the various other species in Section 5.5.5.
- 66-25** DOE is aware of the 2013 USFWS concurrence letter to NASA. A reference to the letter was added to the text.
- 66-26** The intent of the air quality cumulative impacts analysis is to evaluate potential scenarios that could produce the highest off-site pollutant impacts from the combination of DOE and non-DOE activities. Due to their proximities and intensities, if the proposed Boeing and NASA cleanup activities occurred at the same time as the proposed DOE cleanup activities, then these combined activities would represent a maximum project cumulative air quality impact scenario. In this Final EIS, the analysis

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National Aeronautics and Space Administration**

referred to in the comment was retained, but text was added to clarify that this is referring to a possibility of combined impacts if DOE, NASA, and Boeing activities were underway simultaneously and the wind was from a particular direction.

- 66-27** Chapter 5, Section 5.5.7, of this Final EIS was revised to clarify that truck trips are limited to 96 per day.
- 66-28** Table notes in Table 5-6, in this Final EIS, were revised to indicate that transportation-related accident fatalities were calculated by DOE.
- 66-29** This Final EIS was revised to indicate that equivalent single axle loads were estimated by DOE based on the number of truck trips for NASA presented in Table 5-1.
- 66-30** **The “Pavement Deterioration” section in Chapter 5, Section 5.5.8.2, of this Final EIS, was revised to indicate that pavement deterioration impacts were estimated over the durations of the cleanup activities.**
- 66-31** Chapter 5, Section 5.5 was revised to ensure consistency with the information in the NASA EIS for remediation of Area II. NASA activities are identified as contributing little to the cumulative impact in the health and safety resource area.
- 66-32** Regarding the commenter’s statement that “these resources are unique to NASA and impacts to them do not represent a cumulative concern, as DOE actions would not affect these resources,” DOE does not agree. Although, DOE activities would not impact the test stands, the combined DOE, NASA, and Boeing activities at SSFL would impact the cumulative value of cultural resources across the site and in the larger Region of Influence.
- 66-33** In Chapter 5, Section 5.5.11.1, of this EIS, the text explains that National Register of Historic Places-eligible sites in DOE, NASA, and Boeing administered areas may be protected from impacts by Section 106 agreement documents or through the 2010 AOC, thus not adding to cumulative impacts on cultural resources. However, this section goes on to say that sites that are not individually eligible for listing on the National Register of Historic Places could be adversely affected, adding to cumulative effects on cultural resources. Large-scale developments outside SSFL would contribute to a cumulative adverse impact on cultural resources if archaeological sites are encountered during project construction, are paved over, or are disturbed at a later date due to human activity.
- 66-34** DOE is aware of the 2013 USFWS concurrence letter to NASA but to be clear, the letter does not state that it is a Biological Opinion. The 2013 USFWS letter is referenced in this EIS. The Biological Opinion for this DOE SSFL Area IV EIS does

**Commenter No. 66 (cont'd): Peter Zorba, NASA Project Director,
National Aeronautics and Space Administration**

not address the effects of NASA's proposed activities. As stated in the 2018 USFWS Biological Opinion (see Appendix J), the Biological Opinion addresses "soil cleanup, groundwater cleanup, building and infrastructure removal, and habitat restoration within Area IV and the northern buffer zone of the Santa Susana Field Laboratory (SSFL) under DOE's jurisdiction."

- 66-35** DOE appreciates the updated Integrated Cultural Resources Management Plan provided by NASA. However, DOE did not change the citation in Chapter 9 of this EIS. That chapter contains histories and perspectives provided by Native American contributors. Because the 2010 version was cited by the author, we are leaving the reference in Chapter 9 unchanged. DOE cites the 2017 version in Appendix F, of this Final EIS, where Table F-1 lists previous studies within the region of influence, which for cultural resources includes all of SSFL and the area within a 1-mile radius of SSFL.

Commenter No. 67: Winston Wright,
Planning Manager, County of Ventura

RESOURCE MANAGEMENT AGENCY
county of ventura

Planning Division
Kimberly L. Prillhart
Director

April 12, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Subject: Comments on Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (DEIS)(DOE/EIS-0402) in Ventura County, California pursuant to the National Environmental Policy Act (NEPA), as amended (42 U.S.C. §4321 et seq.) and the National Historic Preservation Act (NHPA), as amended (16 U.S.C. §470 et seq.)

Dear Ms. Jennings:

Thank you for the opportunity to review and comment on the subject document. As a potential regulating governmental agency over portions or aspects of the above-referenced project site and in response to the Notice of Availability of the DEIS (DOE/EIS-0140), the County of Ventura Planning Division provides the U.S. Department of Energy (DOE), the NEPA lead agency for this project, the following comments pursuant to NEPA, as amended (42 U.S.C. § 4321 et seq.), the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Parts 1500-1508), and DOE implementing regulations of Title 40, Code of Federal Regulations, Parts 1500-1508 (40 CFR Parts 1500-1508) and 10 CFR Part 1021, respectively.

The Planning Division evaluated the DEIS for consistency with the Ventura County General Plan and the Non-Coastal Zoning Ordinance. This consistency evaluation provides an opportunity for the Planning Division to identify key issues of concern related to land use, and to notify the DOE of local regulatory requirements that would be applicable for a non-federally owned property.

The Planning Division has a significant concern that the cleanup alternatives were not developed in a way that reasonably anticipates future land uses. Throughout the DEIS, the DOE bases its assessment on a "hypothetical future suburban residential land use" (DEIS page S-5) that "did not include the indirect garden pathway of ingestion of homegrown fruits and vegetables" because "Boeing has stated that it will restrict future land use and prohibit residential houses and background fruits and vegetables (Boeing 2016b)" (EIS page S-18).

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67-1 As the commenter recognizes, Boeing, not DOE, is the landowner and has formalized its stated intentions that its property at SSFL will be maintained as open space. Since release of the Draft EIS, Boeing and North American Land Trust executed and filed with Ventura County Grant Deeds of Conservation Easement and Agreements (conservation easements) restrict future use of the property it owns at SSFL to open space, forever prohibiting residential, agricultural, and commercial development or use of the site (Ventura County 2017a, 2017b)); this includes Area IV and the NBZ. This Final EIS was revised to reflect the conservation easements and their restrictions. This Final EIS adds an assessment scenario that addresses future use as open space (Conservation of Natural Resources Alternative – Open Space Scenario) and retains a scenario from the Draft EIS that evaluates future use as suburban residential (without garden) (Conservation of Natural Resources Alternative – Residential Scenario). An agricultural or any other scenario was not considered in this Final EIS because they are prohibited by the conservation easements.

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Planning Manager, County of Ventura

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Ventura County's General Plan land use designation for Area IV and the Northern Buffer Area (NBZ) is "Open Space". Without an explanation and a solid commitment from Boeing as to how future land uses will be restricted, the DOE should be obligated to consider the full range of potential land uses that can occur within Area IV and the NBZ. The land uses that are consistent with the Open Space land use designation include commercial agriculture (e.g. row crops and orchards), animal husbandry (e.g. grazing, the keeping of farm animals, and equestrian uses), and a single-family dwelling for each legal lot. Without binding commitments from Boeing, DOE's assessment is premature and speculative.

As the successor in interest to SUP 248, and the owner of the subject property, Boeing has an obligation to openly disclose its intentions and cooperate with the preparation of the EIS. In addition, as a beneficiary to SUP 248, the DOE should fully remediate the contamination caused by the research activities that were approved by the issuance of SUP 248 (NCZO §8111-8.1). A statement made by Boeing that future land uses will be restricted at SSFL is not substantial evidence that DOE can rely on in the EIS. For the DOE to limit its analysis and risk assessments to certain land uses, Boeing must now be willing to commit to and disclose mitigation measures that detail the land use restrictions it plans to place on the SSFL property.

Future land uses for Area IV and the NBZ are specified by the County of Ventura's zoning designation. The current zoning for Area IV is Rural Agricultural with a 5-acre minimum lot size (RA-5 ac) and the NBZ is Open Space with a 160-acre (OS-160 ac) minimum lot size. Article 5 of the NCZO (Uses and Structures by Zone) (starting on pg. 5-1) shows minor differences in the uses that can be permitted by a ministerial permit in the RA-5 ac and the OS-160 ac zones, aside from the size of certain structures (e.g. principal and accessory agricultural structures). The intensity of use and potential number of uses that can be permitted in the SSFL boundaries is directly tied to the number of legal lots within the SSFL boundary. Essentially, each legal lot in these zones can be entitled with a single-family dwelling, an accessory dwelling (e.g. guesthouse), principal buildings used for agricultural (e.g. greenhouses and preliminary packing facilities), and accessory agricultural buildings (e.g. barns and stables). All of these uses are permitted through a ministerial Zoning Clearance with no County discretion. An unlimited area of agricultural crops, including residential gardens, is allowed and an unregulated number of farm animals may be kept on each lot over 10-acres in size. Due to these allowances, it is inappropriate to exclude the risk of consuming agricultural products that could be grown within project area's boundary.

In addition to the number of sensitive uses that can occur on the property, there is unknown number of legal lots within the SSFL boundary, including within Area IV and the NBZ. To reduce the potential number of uses that can be entitled on the property, Boeing should commit to merging the underlying lots and record a single certificate of compliance for the entire property with the Ventura County Recorder [CA Gov. Code §66499.35(a)]. This is a feasible mitigation measure that can, combined with

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recording a legal instrument such as a conservation easement, limit the number of uses that can be permitted on the property.

In addition to evaluating all potential land uses and incorporating mitigation measure that reduce the number of uses that can be entitled on the property, the DOE should include an analysis of cleanup levels stipulated in its Administrative Order on Consent (AOC) with the Department of Toxic Substance Control. Without such an analysis, the DOE cannot honor past commitments made to the Citizens of Ventura County (see attached County of Ventura Board of Supervisor's March 7, 2017 letter). As a beneficiary to a Special Use Permit issued by the County of Ventura (SUP 248), the DOE should remediate the contamination within Area IV and the NBZ to levels stipulated in the AOC and restore the affected environment as near as possible to its original state.

There are several policies contained in the County's General Plan that support protection of biological resources that pertain to the Proposed Action. The Santa Susana Field Laboratory is identified as an area with a "Significant Biological Resource" under the Figure 1.5.6.2, *Biological Resource Map*, in the General Plan Resource Appendix. The EIS should discuss consistency with these General Plan policies by identifying impact intensity, type, context, and duration. Mitigation measures should be developed that preserve and protect SSFL biological resources, and incorporate recommended wetland protections. These General Plan policies include:

(1) wildlife migration corridors, threatened or rare species and their habitats, and locally important species/communities that are considered to be significant biological resources to be preserved and protected from incompatible land uses and development (GP Goal 1.5.1); and

(2) wetland protection policies, such as a 100-foot setback from significant wetland habitat for all discretionary development (GP Policy 1.5.2.4) and a requirement to evaluate biological impacts for discretionary projects within 300 feet of waters and wetlands (GP Policy 1.5.2.3).

The Ventura County General Plan's Goal states that with biological resources identified as Locally Important Species and Communities are significant biological resources that should be preserved and protected from incompatible land uses and development (Goal 1.5.1). Impacts to Ventura County Locally Important Plant Species identified on-site should be evaluated and mapped (e.g., *Allophylum divaricatum* and *Crassula aquatic*). For a complete listing of Locally Important Species please see the following link:

<http://www.ventura.org/rma/planning/conservation/locally-important-species.html>

Impacts to Locally Important Communities (e.g., Venturan coastal sage scrub, oak woodlands) should be acknowledged in the EIS. The EIS should evaluate direct and

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67-2 The Draft and this Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC, the Cleanup to AOC LUT Values Alternative. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of the AOC cleanup alternative. The Special Use Permit (governing the industrial activities [general aerospace industrial research]) allowed the testing and research activities that DOE, NASA, and Boeing (and their predecessor organization) conducted to be performed at SSFL. The 2010 AOC was developed independent of and has no relationship to the Special Use Permit. Boeing, as the landowner and permit holder, will address with the county any requirements remaining for the permit. DOE will continue to work with Boeing to ensure that cleanup of Area IV and NBZ is consistent with Boeing's future land use plans. DOE notes that all of the action alternatives evaluated in this Final EIS would clean up Area IV and the NBZ to a level that is protective of public health and the environment.

67-3 Based on DOE's understanding of the comment, the EIS was revised to provide further discussion of impacts on wildlife and the mitigation measures were revised to reflect suggested text, as appropriate. For example, Chapter 2, Section 2.3.2, of this EIS has been modified to indicate that development of areas in which the exemption process would be applied includes consideration of the Ventura County list of locally sensitive species. As a result, the maps showing areas in which the exemption process would be applied were revised to indicate areas that DOE proposes to protect because they include Ventura County "locally important species and communities" as identified in the comment. For each vegetation community identified in Chapter 3, Section 3.5, the equivalent vegetation mapping according to the current version of *A Manual of California Vegetation* (Sawyer et al. 2009) was incorporated. There is discussion about nighttime work in this Final EIS. For example, in Chapter 4, Section 4.5, this Final EIS states, "For this project, most impacts related to vegetation and soil removal would be long-term due to the length of time required to restore vegetation and wildlife habitat after remediation, except in rapidly establishing vegetation types such as annual grassland. Impacts related to human activity, including noise, dust, and night-time lighting would generally be categorized as short-term. Potential adverse impacts on species federally listed as threatened or endangered would be considered substantial." Section 4.1 of this EIS states "In addition, light pollution would be minimal under any alternative because work would take place during daytime hours, and any need for nighttime lighting (e.g., repairs to equipment) would be infrequent and temporary." Chapter 6, Table 6-1, identifies the use of temporary flagging or fencing to delineate work areas to avoid worker encroachment in sensitive biological areas, including

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indirect (i.e., dust) impacts to Locally Important Communities. In addition, within the project alternatives the Biological Resource Exemption Areas should include areas that contain Ventura County Locally Important Species and Communities, whenever feasible.

As mentioned previously, Biological Resource Goal 1.5.1 of the Ventura County General Plan describes wildlife migration corridors to be significant biological resources that must be protected. Wildlife corridors have been mapped in Ventura County and throughout southern California in the South Coast Missing Linkages Report¹, and the Santa Susana Field Lab is located directly adjacent to these wildlife migration corridors. The SSFL lies immediately east of these linkages and comprises habitats that are used for local and regional wildlife movement.

The project site contains significant habitat connections and movement patterns for both transitory and permanent wildlife populations. Direct impacts from habitat destruction, fencing, and equipment can create physical barriers to wildlife movement while indirect impacts from lighting, noise, and increased human activity may also discourage wildlife use of the area. Impacts to the regional wildlife corridor, including temporary and long-term introduction of barriers to gene flow, should be considered and mitigated in the DEIS. To ensure consistency with this goal, it is recommended that mitigation measures be incorporated that use fencing to exclude wildlife from construction and remediation zones while utilizing wildlife permeable fencing when needed to allow movement through areas not undergoing active work. In addition, night work should be avoided, to the maximum extent feasible, and measures should be taken to avoid lighting that is of high intensity and illuminates habitat areas. Remediation activities and post-remediation open space use should facilitate wildlife movement and habitat connectivity.

Vegetation communities, which are briefly categorized and discussed in Section 3.5.2 of the DEIS, should be mapped consistent with the California Manual of Vegetation (2010) to the alliance level and the association level in EIS. The current vegetation map was developed using classification system no longer used and does not incorporate updated rarity and conservation designations. This will ensure all vegetation on site is identified using the current vegetation classification system, that all mapped vegetation is assessed adequately for rarity and sensitivity, and that any impacts are avoided, minimized, and mitigated as needed.

The EIS should specify the off-site locations where imported replacement native soil would be obtained. Retention of native topsoil should be prioritized, and replacement native soil should be obtained at a location that is as close as possible to the site and is

¹ Penrod et al. 2006. South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection. Produced by South Coast Wildlands, in cooperation with National Park Service, Santa Monica Mountains Conservancy, California State Parks, and The Nature Conservancy.

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vernal pools, and reduce the likelihood of animals in the work zone; fencing is also identified for protection of sensitive plant species (e.g., oak and other trees). Expanded discussions of the impacts to wetlands and animal movement have also been added to Chapter 4, Section 4.5, of this Final EIS.

DOE and DTSC have not yet identified an offsite source for replacement soil for use as backfill. DOE agrees that the soil characteristics need to be as close as possible to those of the soil being removed from the site. DOE acknowledges the Ventura County policy, requirements, and guidelines on replacement soil and, if the source of backfill soil is within the county, DOE will ensure that applicable requirements are met. Please refer to Section 2.3, "Suitable Backfill Soil," of this CRD for additional information.

Commenter No. 67 (cont'd): Winston Wright,
Planning Manager, County of Ventura

Ms. Stephanie Jennings
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as close in soil characteristics to minimize the loss of native seed, soil microbes, etc. If this location is within the unincorporated area of Ventura County, a discretionary permit may be required to extract soils, and an analysis of potential impacts associated with the removal of soil from that property should be provided in accordance with the County's thresholds of significance. Those thresholds are found in the Ventura County Initial Study Assessment Guidelines. In addition, the removal of off-site soil must be evaluated for consistency with the County's policies and ordinances.

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Measures to minimize impacts for biological resources within the DEIS are found in Table 6-1, including measures for special-status trees and Protected Trees as defined in the Ventura County Non-Coastal Zoning Ordinance (NCZO §8107-25). The DEIS Measures include a Tree Management and Preservation Plan (Table 6-1, Item 5-3). To be consistent with Ventura County's Tree Protection Regulations in the Non-Coastal Zoning Ordinance, mitigation measure should be incorporated that offset the loss of all Protected Trees (e.g. Oaks, Sycamores, Heritage Trees, and Historical Trees). Offsets for the loss of Protected Trees can include transplantation, planting of new Protected Trees, dedication of land containing Protected Trees, or a financial contribution to the County's Tree Mitigation Fund. In addition, it is recommended that this Plan incorporate procedures for monitoring the health of Protected Trees that are encroached upon by remediation activity or development. This monitoring should include an evaluation of the tree's health by a certified arborist before commencement of remediation and for a period of at least five years after encroachment and disturbance activities cease.

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In Chapter 6, Table 6-1, of this Final EIS, Minimization Measure 5-3 was revised to indicate that offsets for the loss of protected trees and pre- and post-remediation monitoring of protected trees are among the protection measures that may be incorporated into the Tree Management and Preservation Plan.

Conclusions:

The DEIS states that it is the intent of Boeing, the property owner, "to maintain its portion of the SSFL (including Area IV and the NBZ) as undeveloped open space", and that it would "restrict future land use to prevent development for any commercial, industrial, agricultural, or residential purpose." (DEIS S-6) The preservation of the remediated site as open space can continue to support numerous significant biological resources and passive open space uses on the subject property. However, based on the General Plan Land Use designation and zoning of the parcels, numerous sensitive uses (e.g. residential and agricultural) are allowed by right and without County discretion. The Planning Division suggests that the DOE work with Boeing to voluntarily merge all of the underlying lots with the SSFL and execute a legal instrument that would encumber the land to prohibit residential and agricultural uses. Without such a commitment from both the DOE and Boeing, the EIS should evaluate every potential land use that is allowed in the Open Space land use designation and RA-5 ac zone.

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While the Planning Division supports remediating the site to cleanup levels stipulated in the AOC, it also acknowledges that this will cause profound disturbance to the biological resources. SSFL contains many rare and sensitive species that have persisted in the area despite the contamination. Affected areas will require a substantial, focused, and

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DOE acknowledges your preference for "cleanup to levels stipulated in the AOC" and the associated environmental consequences identified in this EIS. By this, we assume you are referring to the cleanup levels established in the Look-Up Tables (DTSC 2013a, 2013b) developed by DTSC in accordance with the AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. As described in Chapter 6 of this Final EIS, DOE would incorporate multiple Measures to Minimize Impacts and would consider numerous other Mitigation Measures for biological resources.

Commenter No. 67 (cont'd): Winston Wright,
Planning Manager, County of Ventura

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prolonged effort to achieve revegetation and restoration of habitat, including replacement of removed soil with soil similar in parent material, texture, and nutrient status; collection and propagation of native plants including oaks and shrubs; and several years of maintenance, weed control, and monitoring until the vegetation is self-sustaining. The DOE should identify every feasible mitigation measure in the EIS that will make this happen and should follow through with those measures to restore the affected environment to the maximum amount feasible.

Thank you for the opportunity to review and comment on the DEIS. Please do not hesitate to contact me if you have any questions regarding this letter. I can be contacted by telephone at [REDACTED]

Sincerely,



Winston Wright
County of Ventura
Planning Manager

cc: Chris Stephens, Resource Management Agency Director
Kim Prillhart, Planning Division Director
Members of the Ventura County Board of Supervisors

Attachments: County of Ventura Board of Supervisors, 2017-03-07, Board Letter
County of Ventura Board of Supervisors, 2017-03-07, Comment Letter

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**Commenter No. 68: Steve Bennett and Linda Parks,
Board of Supervisors, County of Ventura**



**BOARD OF SUPERVISORS
COUNTY OF VENTURA**
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March 7, 2017

Board of Supervisors
County of Ventura
800 South Victoria Avenue
Ventura, CA 93009

SUBJECT: Recommendation of Supervisor Parks and Supervisor Bennett that the Board of Supervisors Send a Comment Letter to the U. S. Department of Energy Commenting Stating that its Draft EIS on Remediation of its Santa Susana Field Lab Site Should Include an Analysis of Cleanup to Levels Stipulated in its Administrative Order on Consent with the Department of Toxic Substance Control.

RECOMMENDATIONS:

1. Send a comment letter on the DOE's Draft EIS on remediation of its Santa Susana Field Lab (SSFL) site stating that the EIS should include an analysis of cleanup to levels stipulated in the Administrative Order on Consent.
2. Request the CEO's Office communicate the Board's position to legislative representatives.

DISCUSSION:

Beginning in the 1940s the federal government conducted rocket and nuclear testing activities at the SSFL in Ventura County. The work was conducted with substantial disregard for the environment. One of its nuclear reactors experienced a partial nuclear meltdown in 1959, and two other reactors experienced accidents with significant fuel damage, causing releases of radioactivity into the air. This, in addition to napalm and dioxin incineration in open-air burn pits, dumping of over 500,000 gallons of trichloroethylene (TCE) and perchlorate, and other contamination from over the 50 years of operations, left the site highly polluted with radioactive and chemical contaminants. The parties responsible for cleaning up SSFL are DOE, NASA and the Boeing Company.

In 2010, legally binding cleanup agreements called Administrative Orders on Consent (AOC), were entered into by NASA and DOE with California Department of Toxic Substances

68-1 The Draft EIS and this Final EIS include an alternative that incorporates the technical elements of the AOC cleanup, the Cleanup to AOC LUT Values Alternative. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD, for a discussion of the Cleanup to AOC LUT Values Alternative.

68-2 As indicated in Chapter 1 of this Final EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater. With respect to Area IV and the NBZ, the subjects of DOE's EIS, there was no burning of napalm, no dioxin incineration, no open-air burn pits, and no dumping of 500,000 gallons of TCE and perchlorate by DOE or its contractors. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Examples of prior cleanup actions are provided in Chapter 3, Section 3.2.5, of this EIS. Contrary to prior public perception, extensive soil sampling studies conducted by EPA and DOE with DTSC oversight have shown that Area IV and the NBZ are not highly contaminated. Please refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

Regarding comments related to NASA and Boeing's responsibilities, this EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. This EIS will inform DOE decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste.

NASA separately prepared an EIS that addresses cleanup of the NASA portions of SSFL. *The Final Environmental Impact Statement (EIS) for Demolition and Environmental Cleanup Activities at Santa Susana Field Laboratory in California* was published by NASA in March 2014 with a ROD issued for building demolition in April 2014. In this ROD, NASA decided to proceed with the demolition of structures activities, but postponed a decision on soil and groundwater cleanup. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which DOE, NASA, and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017]).

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Commenter No. 68 (cont'd): Steve Bennett and Linda Parks,
Board of Supervisors, County of Ventura

Board of Supervisors
March 7, 2017
Page 2

Control (DTSC). The AOC requires all of the detectible radioactive and chemical contamination at their SSFL operations be cleaned up to background levels similar to those before the site was contaminated.

In May of 2012, DOE issued a notice regarding preparation of an Environmental Impact Statement (EIS) regarding the cleanup and in 2016 a draft EIS was released. The Draft EIS was released for comment in January 2017 and comments are due on March 14, 2017. Unfortunately the EIS does not analyze the impacts of cleaning the DOE site to levels stipulated in the AOC. Instead, hundreds of thousands of cubic yards of soil, some with known significant chemical and radiological contamination that would be covered by the AOC, are exempted from remediation. It is recommended that the Board of Supervisors send a comment letter requesting the EIS be consistent with remediation of DOE's SSFL site to the levels stipulated in the AOC.

Sincerely,



Steve Bennett
Supervisor, First District



Linda Parks
Supervisor, Second District

Attachment: Letter to DOE

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The analyses in this DOE Final EIS were performed to evaluate the potential environmental impacts associated with the various alternatives for cleanup of SSFL. Results of the analyses allow a comparison of potential impacts and tradeoffs between the alternatives. All of the action alternatives evaluated in the EIS would result in a proper cleanup (per EPA and DTSC guidance) of those areas of SSFL for which DOE is responsible, Area IV and the NBZ, and be protective of human health and the environment given the future land use. In the case of soil remediation, leaving more soil, and consequently low concentrations (below EPA and DTSC risk levels) of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides would result in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Committer No. 69: Anitha Balan,
Public Works Agency Transportation Department, County of Ventura



County of Ventura
Public Works Agency
Transportation Department
MEMORANDUM

DATE: March 8, 2017
TO: RMA – Planning Division
Attention: Clay Downing
FROM: Anitha Balan, Engineering Manager II *GBW for AB*
SUBJECT: **REVIEW OF DOCUMENT 17-004** Draft Environmental Impact Report (DEIR)
Project: **Santa Susana Field Laboratory (SSFL) Area IV and Northern Buffer Zone**
Lead Agency: **U.S. Department of Energy**
Contaminated Soil and Groundwater Remediation Projects at the SSFL, Simi Hills, Ventura County

Pursuant to your request, the Public Works Agency Transportation Department (PWATD) has reviewed the DEIR for the Santa Susana Field Laboratory (SSFL) Area IV project.

The U.S. Department of Energy (DOE) has prepared a Draft Program Environmental Impact Report (DEIR) to assess alternatives for environmental cleanup at the Santa Susana Field Laboratory site in Ventura County. Two public scoping meetings were previously held in 2014 to provide information on the DEIR preparation process and to invite public comments on the scope of the environmental issues and the alternatives to be considered in the DEIR. Three sets of alternatives have been proposed. The Groundwater Characterization and Cleanup Program is one of many programs at the SSFL and consists of ongoing groundwater monitoring of existing wells, sampling of new groundwater locations, and treatment of contaminated groundwater when needed.

We offer the following comment:

The Transportation Department has received and will continue to receive notices regarding the activities at the SSFL. We have reviewed several documents in regard to the SSFL cleanup and our previous comments are still valid and applicable. We understand that we will receive the EIR when it becomes available, in addition to a transportation study currently underway by the Department of Toxic Substance Control, therefore we will not reiterate our previous comments. Our previous comments are provided in memorandums for the following thirteen (13) RMA reference numbers: 10-024; 10-027; 10-031; 10-035; 11-008; 11-009; 11-016; 11-021; 12-027; 13-010; 13-019; 13-027 and 17-004.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

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Thank you for your comment; however, DOE notes that it was not the recipient of the referenced 13 memoranda. Your comment has been included in the Administrative Record for the EIS.

**Commenter No. 70: Zia Hosseinipour, Manager,
Advanced Planning, Ventura County Watershed Protection District**



VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 WATERSHED PLANNING AND PERMITS DIVISION
 800 South Victoria Avenue, Ventura, California 93009
 Zia Hosseinipour, Manager, Advanced Planning (805) 654-2454

MEMORANDUM

DATE: February 8, 2017
TO: U.S. Department of Energy, Office of Environmental Management
SUBJECT: RMA 17-004 Santa Susana Field Laboratory Area IV (EIS-042)
 Draft Environmental Impact Statement for Remediation of Area IV & the
 Northern Buffer Zone of the Santa Susana Field Laboratory
 South of Meire Canyon, Simi Valley, CA
 Arroyo Simi Watershed, Zone 3
 Ventura County Watershed Protection District Proj. No. WC2017-0005

Pursuant to your request dated January 2017, this office has reviewed the submittal of a Draft EIS for the remediation of Area IV and the northern buffer zone of the Santa Susana Field Laboratory and offers the following responses.

1. Boeing has committed to clean up the Site to a standard that is equivalent to a suburban residential standard that is more protective of human health than that applicable to open space uses. The DOE Report Chapter 2 Page 2-28 states "... As a result, cleanup planning for Area IV and the NBZ was transformed from a radionuclide-base (91,000 cubic yards) to a chemically impact soil cleanup (1,410,000 cubic yard)." In other words, the radionuclide pollution becomes minor and the chemical pollution is the major problem.
2. In Action S.3, DOE proposes to undertake the standard steps for DOE-owned facilities. Will the Boeing Company and NASA also complete and implement similar plans to address soil, buildings, and groundwater issues? A postponement or refusal by the Boeing Company and NASA to clean up their contributions will potentially result in soil, building, and groundwater pollution continuously remaining onsite and potentially spreading. The Ventura County Watershed Protection District (District) recommends that the Boeing Company and NASA implement the same time action that DOE is proposing.
3. As presented on Table S-1, it is the position of DOE that "No Action Alternative of continued maintenance" is the recommended method. Under these conditions, the Project Areas could be safely transferred to an open space use. If the radionuclide-base (91,000 cubic yards) soil and mercury contaminated soil (? cubic yards) is removed from Area IV and NBZ, the Project Site could become safer and representative of DOE's statement: "No Action Alternative of continued maintenance".

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70-1 Thank you for your comment, DOE agrees that the cleanup of chemically impacted soil would be the larger component of the soil remediation activity.

70-2 The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. Boeing and NASA cleanup activities are only considered as part of cumulative impacts (Chapter 5). Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities is being evaluated by DTSC in a Program Environmental Impact Report under the California Environmental Quality Act. DTSC will issue a Notice of Determination for the Program EIR identifying the selected remedial actions. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (Draft Program EIR) was issued by DTSC in September 2017 (DTSC 2017). The Draft Program EIR considers the timing of the Boeing, NASA, and DOE cleanups.

70-3 The commenter is mistaken; it is not "the position of DOE that 'No Action Alternative of continued maintenance' is the recommended method." The "No Action Alternative of continued maintenance" would not meet DOE's purpose and need for agency action and is not DOE's Preferred Alternative. The statement in the Draft EIS, Table S-1, was that the No Action Alternative of continued maintenance was adequate to provide a baseline (emphasis added) for evaluating action alternatives.

The Draft EIS did not identify a "recommended" or Preferred Alternative. DOE's Preferred Alternatives are described in Chapter 2, Section 2.7, of this Final EIS.

DOE's preferred alternative for soils remediation is the Conservation of Natural Resources, Open Space Scenario. DOE is identifying this as the preferred alternative because it is consistent with the risk assessment approach typically used at other DOE sites, other DTSC-regulated sites, and EPA Superfund sites, which accounts for the specific future land use of the site. Use of a risk assessment approach would be consistent with the process being used by Boeing for the land it owns at SSFL and recognizes the Grant Deeds of Conservation Easement and Agreements (Ventura County 2017a, 2017b) that commit Boeing's SSFL property, including Area IV and the NBZ, to remaining as open space. This scenario uses a CERCLA risk assessment approach that would be protective of human health and the environment rather than LUT values (action levels). The 2010 AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects to engage DTSC in discussions about such changes in order to implement this soil remediation alternative.

**Commenter No. 70 (cont'd): Zia Hosseinipour, Manager,
Advanced Planning, Ventura County Watershed Protection District**

February 8, 2017
Draft Environmental Impact Statement for Remediation of Area IV & the Northern
Buffer Zone of the Santa Susana Field Laboratory
Page 2 of 2

- 4. DOE has estimated that there is approximately 1,413,000 cubic yards of contaminated soil on the Site. The District suggests the following mitigation measures:
 - a. Remove all 1,413,000 cubic yards of contaminated soil from the Site.
 - b. There are 62 bedrock wells in Area IV (two wells are abandoned). DOE should provide historical mapping of all pollution on the Site including depth and spatial areas of chemical and radiological impacts.
 - c. The Boeing Company should implement an outside groundwater tracing wells network system along with annual public reporting of test findings and recommendations.

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END OF TEXT

DOE's preferred alternative for building demolition is the Building Removal Alternative. Under this alternative DOE would demolish the 18 DOE-owned buildings in Area IV and transport the resulting waste off site for disposal. Demolition of thirteen facilities and disposition of the resulting debris would be in accordance with DOE requirements and applicable laws and regulations. Three facilities at the Radioactive Materials Handling Facility (RMHF) and the two facilities comprising the Hazardous Waste Management Facility would be closed in accordance with DTSC-approved Resource Conservation and Recovery Act (RCRA) facility closure plans.

DOE's preferred alternative for groundwater remediation is a combination of the Treatment Alternative and the Monitored Natural Attenuation Alternative. DOE would treat the groundwater plumes with higher concentrations of contaminants (the Former Sodium Disposal Facility, Hazardous Materials Storage Area, Building 4100/56, and Building 4057 plumes) in accordance with the results of the final RCRA Groundwater Corrective Measures Study. Source removal is the preferred alternative for the strontium-90 source. Monitored natural attenuation would be used for plumes not amenable to active treatment – the two plumes with the lowest concentrations of trichloroethylene (Metals Clarifier plume and the RMHF plume) and the tritium plume. DOE's proposed groundwater remedial actions would be included in the final Corrective Measures Study submitted to DTSC for approval.

70-4 In this Final EIS, DOE has included a sensitivity evaluation that assesses the impacts of removing all soil that exceeds the AOC LUT values (the revised estimated volume in this Final EIS is 1,616,000 cubic yards); please see Appendix L.

70-5 DOE has performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS was updated with information from the draft groundwater remedial investigation report, including information on the magnitude and extent of the existing groundwater contamination in Area IV and the NBZ. The report is included as a reference for this Final EIS and is available for review on DOE's website.

70-6 Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. Regarding the commenter's recommendation that "The Boeing Company should implement an outside groundwater tracing wells network system..." suggestions regarding Boeing should be submitted directly to Boeing.

**Commenter No. 71: Lori Glasgow, Executive Officer,
County of Los Angeles Board of Supervisors**



LORI GLASGOW
EXECUTIVE OFFICER

**COUNTY OF LOS ANGELES
BOARD OF SUPERVISORS**

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April 5, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings:

I am writing on behalf of the Los Angeles County Board of Supervisors. The County of Los Angeles has reviewed the draft Environmental Impact Statement (EIS) for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL) proposed by the U.S. Department of Energy (DOE) as lead agency under the National Environmental Policy Act. The draft EIS analyzes the potential environmental impacts of alternatives for conducting cleanup activities in Area IV of the SSFL and the adjoining Northern Buffer Zone, located in the County of Ventura, adjacent to the County of Los Angeles. The County of Los Angeles Board of Supervisors has noted that radioactive and chemical contaminants from the long-closed SSFL have affected the soil, air and water in nearby Los Angeles County communities for decades and have posed serious health risks, such as possible clusters of rare cancers in children and adults, in neighboring communities. The County of Los Angeles therefore urges a full and timely cleanup of the site.

The County of Los Angeles Board of Supervisors submits the following comments on the draft EIS during the public comment period which is currently scheduled to end on April 13, 2017:

1. Lack of Full Cleanup

The EIS does not address the full cleanup of the site, a clear violation of the 2010 Administrative Order on Consent (AOC) between the California Department of Toxic Substances Control and DOE. There are currently four alternatives considered in the EIS: three that address partial cleanups (i.e. "leave in place alternatives") and

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71-1 As described in Section 2.7, "Offsite Impacts," of this CRD, there has been extensive onsite and offsite characterization of soil and groundwater contaminants; based on the available data, DOE is confident that significant levels of contamination have not migrated off site from Area IV and the NBZ. The commenter is referred to USEPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts DTSC 2017a), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Also, please refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for a description of the current site conditions.

71-2 DOE acknowledges the County's concern regarding a full and timely cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

71-3 The Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC. The commenter is referred to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of the CRD for further information on this topic. All of the soil remediation action alternatives analyzed in the EIS would be protective of human health and the environment, meaning that under each alternative all contamination posing a risk would be removed. The AOC contemplates in-situ treatment of soils, which would include monitored natural attenuation as described in this EIS. Section 2.9 of the AOC states that the DOE soil remediation plan to be submitted to DTSC for approval describe, "Any areas proposed for in situ or onsite treatment to achieve cleanup goals..." The AOC (Section 6.0) also contemplates that DOE may have to undertake a NEPA analysis; one of the requirements of NEPA is a consideration of a range of reasonable alternatives that meet the purpose and need, without pre-selection of any one alternative.

**Commenter No. 71 (cont'd): Lori Glasgow, Executive Officer,
County of Los Angeles Board of Supervisors**

Ms. Jennings:
April 5, 2017
Page 2

one that is the null (no cleanup). The AOC does not allow for consideration of lower levels of cleanup. The EIS should be based on remediation of SSFL to the levels stipulated in the AOC, provide full analysis of Full Cleanup and full restoration back to the site's environmental native state, and not include consideration of alternatives that would violate the AOC.

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2. Lack of Full Analysis of Multiple Alternative Routes and Modes of Transportation

The EIS offers limited analysis of routes and transportation methods, and has pre-selected certain routes and methods that may have the most impact on surrounding neighborhoods. The limited analysis and pre-selection are misleading because the EIS makes it appear as though no other options are available that would further minimize impacts on residents and businesses. However, during the 2012-2014 alternatives development period, a number of other routes and transport methods were identified that could further minimize neighborhood impacts. These are not analyzed in the EIS and are dismissed as too time consuming to evaluate and/or implement (Pages 2-11 and 2-12). The lack of comprehensive analysis is a disservice to Los Angeles County neighborhoods, residents, businesses, and travelers. Alternate transportation types, methods, and routes should be analyzed in full including, but not limited to, the direct conveyance of contaminated materials from the site to rail and other options, as well as the use of fire roads and other routes to minimize truck traffic and impacts to residents and traffic.

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In response to the commenter's statement regarding a "lack of full analysis of multiple alternative routes and modes of transportation," please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response. Also note that the DTSC included a transportation study in the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* that evaluated alternative routes and modes of transporting materials from SSFL. DTSC concluded that, "transporting soil by truck via Woolsey Canyon Road was the most technically feasible and least environmentally impactful option..." (DTSC 2017b). DOE agrees with the analysis in the Draft Program EIS and consistent with NEPA, DOE considered and dismissed from detailed evaluation a number of transportation routes and modes.

3. Burden of Proof

The AOC mandates full cleanup with limited exemptions allowed only if based upon a Biological Opinion rendered by the U.S. Fish and Wildlife Service (USFWS). However, even though the Biological Opinion has not yet been rendered, every one of the EIS' cleanup alternatives already exempt several hundred thousand cubic yards of soil. Further, this exemption is contrary to a 2010 USFWS Biological Opinion issued to the U.S. Environmental Protection Agency that stated there were no unavoidable or unmitigable negative biological impacts at SSFL. It is not within the DOE's discretion to make such a determination of exemption. Exemptions utilized in the EIS that violate the AOC, and those that could increase the risk of cancers, should be excluded. The DOE should provide compelling and fact-based evidence rather than assertions as to why it believes certain amounts of soil should be exempt from cleanup.

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The 2010 AOC establishes no specific limits regarding exemptions with respect to compliance with the Federal Endangered Species Act and any U.S. Fish and Wildlife Service (USFWS) Biological Opinion. DOE has worked closely with USFWS, the California Department of Fish and Wildlife (CDFW), and DTSC staff in developing the exemption process described in the EIS. USFWS issued its Biological Opinion in August 2018 (Appendix J of this Final EIS) which is based on the exemption process described in the EIS. DOE proposes applying the process for species and sensitive habitats protected under state and local laws and regulations. The 2010 Biological Opinion for the EPA project has no bearing on the DOE soil cleanup project. The 2010 Biological Opinion addressed the cutting of vegetation only. It did not address any type of soil excavation and removal. Finally, the exemption process worked out with

Commenter No. 71 (cont'd): Lori Glasgow, Executive Officer,
County of Los Angeles Board of Supervisors

Ms. Jennings:
April 5, 2017
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4. Additional Public Review Period Between Release of Biological Opinion and Final EIS

The EIS should be recirculated for additional public review and comments after the USFWS Biological Opinion is submitted and all public comments from the current review period are addressed, and before the EIS is finalized.

On behalf of the Los Angeles County Board of Supervisors, your consideration of the above issues related to this critical public health and safety cleanup project is greatly appreciated. The County of Los Angeles looks forward to your response with respect to the comments on the draft EIS.

Sincerely,



Lori Glasgow
Executive Officer

LG:ls

c: Board of Supervisors

71-6

71-6

USFWS, CDFW, and DTSC does not imply that soil cleanup would not be performed in areas in which the exemption process is applied. It is a process that would remove contamination that poses a risk to human health and the environment, but protects endangered species and sensitive habitat where contaminant concentrations fall within the EPA target risk range. Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of this topic and DOE's response.

In response to the commenter's request for additional public review between release of the USFWS Biological Opinion and the Final EIS, another Draft EIS review is not planned. The USFWS Biological Opinion (Appendix J) is consistent with the exemption process description provided in the Draft EIS. Data from the USFWS Biological Opinion (Appendix J) was integrated into this Final EIS, (for example, used to refine the extent of the areas in which the exemption process would be applied).

**Commenter No. 72: Michael N. Feuer, Los Angeles City Attorney;
Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense
Council; Catherine Lincoln, Executive Coordinator,
Committee to Bridge the Gap**



April 5, 2017

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: *Comments on Draft Environmental Impact Statement for
Remediation of Area IV and the Northern Buffer Zone of the
Santa Susana Field Laboratory*

Dear Ms. Jennings:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for remediation of Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL) prepared by the U.S. Department of Energy (DOE). In this transmittal letter we summarize our concerns. A detailed treatment of these concerns is set forth in the attachment.

Background – A Highly Contaminated Site With Half a Million People Living Nearby

SSFL is one of the most contaminated sites in the state. Over the years it housed ten nuclear reactors, a plutonium fuel fabrication facility, a “hot lab” for disassembling highly irradiated nuclear fuel, and open-air “burn pits” where radioactively and chemically contaminated items were burned. One reactor had a partial meltdown; three others had accidents; there were radioactive fires at the hot lab; and decades of open burning of contaminated items. The poor environmental and safety practices of DOE and its predecessor agency, the Atomic Energy Commission, resulted in numerous releases and spills which contaminated soil, groundwater, and surface water, as well as numerous buildings, with radioactivity and toxic chemicals.

72-1

72-1

DOE conducted historic operations under the laws and regulations applicable at the time. Chapter 1, Section 1.3, contains a brief history of activities at SSFL Area IV and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Chapter 3, Sections 3.9.5 and 3.9.6, of the EIS contain information about accidents at Area IV, including the 1959 Sodium Reactor Experiment (SRE)

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

SSFL was established seventy years ago and was supposed to be a remote field lab for work too dangerous to conduct near populated areas. However, over the decades the population nearby mushroomed, so that there are now more than 150,000 people living within 5 miles of the site and more than half a million people living within 10 miles.

Federally funded studies found significant increases in death rates from key cancers among the SSFL workers associated with their work exposures, offsite migration of pollutants at levels in excess of U.S. Environmental Protection Agency (USEPA) levels of concerns, and a greater than 60% higher incidence of key cancers among people living near SSFL than those living further away. Because SSFL is located in hills overlooking the City of Los Angeles and other populated areas below, the contamination migrates downgradient, where neighboring communities can be exposed. Cleanup of the contamination source is therefore critical. However, DOE has had a history of resisting those cleanup obligations.

NRDC, City of Los Angeles, CBG v. DOE Lawsuit Blocked DOE's Prior Attempt to Walk Away from Cleaning Up Most of the Contamination

Fifteen years ago, DOE proposed cleanup standards for SSFL that would have left the great majority of the contamination not cleaned up. The City of Los Angeles, the Natural Resources Defense Council (NRDC), and the Committee to Bridge the Gap (CBG) filed a lawsuit in U.S. District Court, challenging the legality of DOE's actions under the National Environmental Policy Act (NEPA), 42 U.S.C. §4321, *et seq.* In 2007, in an Order highly critical of DOE, Federal District Judge Samuel Conti, granted summary judgment for the plaintiffs and against DOE.¹

In 2010, DOE and the California Department of Toxic Substances Control (DTSC) executed an Administrative Order on Consent (AOC), a legally binding agreement requiring the cleanup of contaminated soil (including the buildings) in Area IV and the NBZ to local background levels, to be completed by 2017. *2017 has arrived and the promised cleanup not only has not been completed, it has not yet even begun.*

In 2012, DOE committed that any EIS would be limited, with the exception of the required No Action alternative, to cleanup alternatives that were compliant with the AOC's required cleanup to background. Any alternative would be about how, not whether, to comply with AOC requirements, as the agreement mandated.

The 2017 DEIS Breaches DOE's 2010 and 2012 Commitments

Despite the above commitments, all alternatives considered in the DEIS would violate the AOC. As DOE states on page S-12 in the DEIS: "DOE expects that, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required."

¹ Citations for all sources referenced in this letter are found in the Detailed Comments, attached.

72-1
cont'd

72-2

accident. With respect to the statements regarding burning radioactive and chemical waste in open pits, the Former Sodium Disposal Facility (FSDF) was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. However, there was no active practice of burning of wastes in Area IV. The FSDF was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). During the course of operations and the period following operations there were numerous soil cleanup actions to remove radiologically and chemically-impacted soils. Some of these actions are described in Chapter 3, Section 3.2.5.3 of the EIS. Over the operation history of the site, there have been 272 numbered structures in Area IV. As the missions for the buildings ended, they were decontaminated and removed. Today only 22 structures, 18 DOE-owned and 4 Boeing-owned, remain in Area IV. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Please refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.10 of this CRD, SSFL Area IV is not "highly contaminated."

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response. As described in Section 2.7 and as confirmed by EPA's radiological study and DTSC's evaluation of Area IV data, only small amounts of chemicals and no radiological contamination extends from Area IV. As stated in Chapter 3, Section 3.4.3, of this EIS, the monitoring well network established for Area IV and the NBZ demonstrates that the contaminants have not moved laterally off of DOE-administered areas of Area IV and the NBZ (groundwater plumes extend from Area IV into the NBZ but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.) Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

72-2 The commenter's statement that "The 2017 DEIS Breaches DOE's 2010 and 2012 Commitments" is inaccurate. DOE was sued by NRDC/City of LA/CBG for not complying with NEPA regarding the Environmental Assessment. The preparation

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

The AOC bars consideration of any "leave in place" alternatives. Yet all four of the DEIS alternatives would leave in place hundreds of thousands of cubic yards of contaminated soil, not cleaned up. **Alternative 1 would leave in place 34-39% of the contamination; Alternative 2 would leave in place 86-91%; Alternative 3 would leave in place at least 90%, and perhaps as much as 95 or 99%; and Alternative 4 would leave 100%.** For the second and third alternative, 98 of 116 toxic chemicals contaminating the area would not be cleaned up at all.

In Alternative 1, DOE proposes to exempt approximately half a million cubic yards of contaminated soil from cleanup. None of the claimed reasons comports with the very narrowly constrained exceptions allowed in the AOC.

In Alternative 2, DOE proposes to leave in place as much as a million cubic yards of contaminated soil. It proposes to not comply at all with the AOC's cleanup standard for toxic chemicals and to instead do no cleanup until contaminant concentrations are hundreds or thousands of times, and in some cases, millions of times, higher than the AOC's required cleanup levels. DOE asserts that these are risk-based limits based on DTSC's suburban residential Risk Based Screening Levels (RBSLs). However, in fact, the DOE proposed concentrations are hundreds and thousands of times higher than the DTSC-approved suburban residential RBSLs. DOE does this by leaving out the required backyard garden component of the residential RBSL. The risks to human health from these high contaminant concentrations is, thus, far greater than DOE asserts.

In Alternative 3, DOE proposes to leave even more contamination behind. This alternative incorporates the weak standards of Alternative 2, but additionally averages contamination over wide areas, so that if there is contamination in one place, it would not be cleaned up because it would be averaged with many acres of soil further away. Additionally, in this alternative, DOE proposes to allow radioactivity levels hundreds of thousands of times higher than the U.S. Environmental Protection Agency's preliminary remediation goals. Radiation doses equivalent to many chest X-rays a year would be allowed.

In Alternative 4, DOE proposes to do no cleanup whatsoever.

It is important to keep in mind that whatever the final end use of SSFL, large numbers of California citizens live nearby, with backyard gardens, and a primary purpose of the cleanup must be to eliminate the contamination source that puts them at risk from migrating pollution.

While claiming that its proposals to abandon large portions of the contamination are designed to protect biological features, in fact it is its contamination of the environment and reversal of promises to remediate that damage that pose the real ecological risks. DTSC has established ecological RBSLs, and the cleanup levels DOE now proposes to employ instead of those promised in the AOC are hundreds, thousands, and tens of thousands times higher. The refusal to clean up this contamination poses a risk to California's environment and to public health.

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72-3

72-4

of this EIS was in compliance with the order issued by the U.S. District Court for the Northern District of California. Section 6.1 of the AOC recognizes that DOE needs to do an EIS. Section 6.2 recognizes that the AOC is potentially inconsistent with that court's order and that the DOE's obligations under the AOC would be stayed, since the court's order remains in effect, and that parties could make modifications to the AOC. Section 6.2 also recognizes that DOE must perform an "environmental review" of which the EIS serves that purpose. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. That is what DOE has done in this EIS through the evaluation of the Cleanup to Revised LUT Values Alternative and the two scenarios of the Conservation of Natural Resources Alternative. The statements the commenter referred to as DOE's 2012 commitments were DOE's based upon information available at that time. The LUT values were not available and the radionuclide and chemical soil investigations were still ongoing. However, DOE's understanding of the implications of fulfilling that intent has changed, both in the impact of the actions required to meet and the feasibility of meeting that intent. Chapter 2, Section 2.3, of this EIS outlines several issues associated with the implementability of the 2010 AOC.

To date DOE has complied with all aspects of the AOC (see Section 2.2 of this CRD). The AOC provides that it can be modified if both DTSC and DOE agree on the need for change. DTSC is in the process of completing its Program Environmental Impact Report (EIR) (the draft was published in September 2017 [DTSC 2017b]). DTSC and DOE would need to reconcile any differences between the outcomes of these two environmental studies (DOE's as decided in the ROD(s) for this EIS and DTSC's Notice of Determination for its Program EIR). Should this reconciliation result in the selection of remediation actions that are not currently identified in the AOC, changes to the AOC would be required. Such changes are allowed (Section 8.0, Modification) upon mutual agreement (in writing) between DOE and DTSC.

DOE's knowledge regarding the nature and extent of soil contaminants, and the impact that the cleanup in accordance with the 2010 AOC LUT values would have without environmental benefit, has evolved since 2012. As discussed in Chapter 2, Section 2.3, of this EIS, DOE determined that there were technical issues and environmental concerns with implementing a cleanup according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under NEPA, in the Draft EIS DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the environment and the health and safety of the public and workers. These two risk-based alternatives, the Cleanup to Revised LUT

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

DOE Lacks the Authority to Decide How Much Cleanup of its Contamination it Will Perform

An EIS is to be performed about *discretionary* federal agency actions. However, DOE has no discretion to ignore the requirements of the AOC. It is a legally binding set of obligations that DOE cannot unilaterally ignore.

Even were there no AOC, decisions as to how much of the chemical contamination to clean up are outside DOE's authority. Under the Resource Conservation and Recovery Act, those decisions are in the hands of DOE's regulator, DTSC. It is the regulator who decides how much cleanup is required, not the party that produced the contamination in the first place.

72-5

The DEIS Fails to Consider Reasonable Transportation Alternatives

Much of the DEIS appears to be an attempt to inflate the impacts of cleaning up while trivializing the risks of abandoning in perpetuity significant amounts of radioactive and chemical contamination. DOE asserts that there is little to no risk from the toxic and radioactive pollution but much inconvenience from the trucks needed to transport the contaminated soil for disposal. As discussed above, it does this by using risk-based screening levels that are orders of magnitude higher than the actual ones approved by DTSC and U.S. EPA, dramatically downplaying the true risks. At the same time, the DEIS fails to evaluate reasonable alternative methods of conveyance and routes.

72-6

Conclusion

DOE is obligated, having contaminated SSFL through its failure to follow proper environmental procedures, to clean the site up fully, as required by the AOC; to do so by the deadlines agreed to; and to mitigate impacts such as trucks hauling away contaminated material by a careful development of alternative transportation options in an EIS. Instead, DOE has dragged its feet for years since the AOC was issued, not only missing the deadline for completion of the cleanup, but not even beginning it. And now in a severely flawed DEIS, the federal agency flouts the authority of the California state agency charged with overseeing this important cleanup by proposing to breach the cleanup agreement it signed and instead leave the great majority of the contamination in place.

72-2
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The public that resides in the area surrounding the site will be placed at continued and perpetual risk if DOE continues on this course. We call this day for extensive revision of the DEIS so that it is fully in compliance with the AOC and DOE's commitments for a complete cleanup of the contamination for which it is responsible.

Values Alternative and Conservation of Natural Resources Alternative (two scenarios), are presented in Chapter 2, Section 2.4 of this Final EIS. As discussed in Chapter 1, Section 1.3, of this EIS, the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued Record of Decision(s) (ROD[s]) pursuant to NEPA.

Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Under NEPA, DOE has a legal obligation to rigorously explore and objectively evaluate reasonable alternatives for cleanup in this EIS. The specific wording of DOE's purpose and need has been refined since it was first stated in the 2007 Advance Notice of Intent, but the overall message expressed by the statement has remained consistent – DOE needs to remediate those portions of SSFL for which it is responsible in a manner that is protective of the environment and the health and safety of the public and workers. The change noted by the commenter in the statement does not change DOE's responsibility for complying with agreements, as well as with other requirements such as regulations and orders.

Regarding the 2017 date for remediation start, a number of activities need to be completed before remediation can begin. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an EIR that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible). The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). The completion of both the CEQA and NEPA processes and certain regulatory actions must occur before DOE can complete the cleanup of soils and groundwater in Area IV and the NBZ. The regulatory actions required include the following: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by DOE in accordance with its regulatory authority provided in the AOC, and (4) DTSC approves the DOE-prepared RCRA closure plans for building

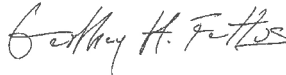
Section 3 – Public Comments and DOE Responses

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Our detailed comments are attached. Supporting documentation is being sent separately on a CD.

Sincerely,


MICHAEL N. FEUER
Los Angeles City Attorney



GEOFFREY H. FETTUS
Senior Attorney
Natural Resources Defense Council



CATHERINE LINCOLN
Executive Coordinator
Committee to Bridge the Gap

Attachment:
Detailed Concerns Regarding the DOE Draft EIS on Cleanup of SSFL Area IV and the Northern Buffer Zone

cc:
Barbara A. Lee, Director, California Department of Toxic Substances Control, with Attachment
Matthew Rodriguez, Secretary, California Environmental Protection Agency, with Attachment
John Laird, Secretary, California Natural Resources Agency

demolition. In June 2017, DOE submitted a letter to DTSC (DOE 2017a) documenting the mutually acknowledged situation that cleanup cannot proceed until required environmental documents (e.g., this EIS, the DTSC program environmental impact report, remediation plans) are completed and that DOE was therefore unable to meet the 2017 cleanup expectations as described in the 2010 AOC (DOE 2017a).

72-3 Please see the response to comment 72-1. As described in that response, there is no evidence of contaminants above risk-based standards leaving Area IV and the NBZ. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. In the Final EIS DOE presents the results of atmospheric modeling deposition of contaminants in nearby neighborhoods.

72-4 The comment is inaccurate. Ecological RBSLs have been developed jointly by all three parties (Boeing/NASA/DOE) and have been reviewed and approved for use by DTSC. The ecological RBSLs applied to the risk assessment are reflective of what DTSC would use throughout California as well as the risk assessment process applied at EPA CERCLA sites and would be protective of human health. DTSC was fully engaged in the development and application of criteria for the biological exemption process (see Appendix E of the Final EIS, Consultations). Protection of ecological receptors and human health were the primary factors in identifying areas where the exemption process would be implemented (i.e., locations with focused cleanup protecting human health and the environment).

72-5 The current provisions of the 2010 AOC are discussed in Chapter 1, Section 1.4 of the Final EIS. The 2010 AOC recognizes on page 19, DOE's legal requirement to prepare an EIS. Section 6.2 of the AOC states that the AOC would be stayed until DOE completes NEPA. NEPA requires every Federal agency to assess the potential impacts of its proposed actions that could have adverse environmental impact. NEPA's requirements apply to all Federal agencies that make discretionary approvals of proposed actions. These requirements apply when the action is proposed by the Federal agency or when another public or private entity's proposed action is being approved, permitted, funded (in whole or in part) or otherwise authorized by a Federal agency.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

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As was done in the Draft EIS, this Final EIS analyzed an alternative that incorporates the technical elements of the AOC using the LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). In response to public input since the 2010 AOC was signed, and as contemplated by the AOC and consistent with its obligations under NEPA, DOE also analyzed alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. The use of soil risk-based criteria is consistent with the approach used by DOE throughout the US, by DTSC at other sites regulated by DTSC, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE disagrees with the commenters' assessment that the EIS inflates the impacts of cleaning up and trivializes the risk associated with leaving chemical and radioactive contamination on site. DOE presented in the Draft EIS, and has refined in this Final EIS, estimates of the quantities of soil that would be removed under each soil remediation alternative, the acreage disturbed, the number of truck trips, the project duration, and the human health risk associated with residual chemical and radiological constituents that would be left on site. To characterize Area IV and the NBZ, there were more than 8,000 soil samples analyzed for chemicals and 3,000 soil samples analyzed for radionuclides. As a result of the radiological characterization, EPA did not find significant amounts of radioactive contamination. The soils characterization was the basis of the estimates of acreage that would be disturbed and the soil volumes that would require removal under each alternative. The magnitude of potential impacts on a number of resource areas (e.g., biological resources, noise, traffic, operational health and safety impacts) have a positive correlation with the acreage disturbed and/or volume of soil removed. For this Final EIS, DOE performed risk assessments of 19 exposure units in Area IV to represent the potential risk remaining following cleanup associated with each soil remediation alternative. The results, presented in Chapter 4, Section 4.9, show that all of the action alternatives would be protective of human health, with the risk of cancer incidence falling within the target risk range for remediation alternatives of 1 in 10,000 (1×10^{-4}) to 1 in 1 million (1×10^{-6}) (EPA 1991).

The commenter is mistaken in the statement that DOE "used risk-based screening levels that are orders of magnitude higher than the actual ones approved by DTSC and U.S. EPA." First, EPA has not established any standards for use by DOE at SSFL. EPA has not been involved in setting risk-based cleanup standards for SSFL.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Detailed Concerns Regarding the DOE Draft EIS on Cleanup of SSFL Area IV and the Northern Buffer Zone

A. BACKGROUND

The history of the site provided in the Draft Environmental Impact Statement (DEIS) is inaccurate and minimizes the problems. We provide here a more complete picture.

72-7

1. A History of Safety Considerations Subordinated to Other Concerns: Accidents, Spills and Releases

The Santa Susana Field Laboratory (SSFL) was established in the late 1940s for rocket testing and in the early 1950s commenced nuclear reactor work. In this initial incarnation, the site was supposed to be a remote field lab for work too dangerous to conduct near populated areas, and the original siting criteria stated that "care must be taken to select an area where prospects for population growth in the near future are not anticipated."¹ However, over the decades the population nearby mushroomed, so that there are now more than 150,000 people living within 5 miles of the site and more than half a million people are within 10 miles.²

SSFL housed ten reactors, plutonium and uranium fuel fabrication facilities, numerous nuclear "critical facilities," and a "hot lab" wherein highly irradiated nuclear fuel from around the nation was cut apart. The facility was operated for the Department of Energy (DOE) and its predecessor agency the Atomic Energy Commission (AEC), as part of the national nuclear complex from the years 1953 to 1998.

Safety considerations were "subordinated to other concerns from the outset."³ Despite being ranked 5th out of 6 candidate sites for the safety of meteorological conditions (in part because of nighttime migration of potentially contaminated air into the San Fernando Valley), the site was chosen as a nuclear testing site nonetheless, in large

72-7 cont'd

¹ NAA-SR-30, *General Reactor Site Survey of the Los Angeles Area*, U.S. Atomic Energy Commission, June 1, 1949, as cited in *Report of the Santa Susana Field Laboratory Advisory Panel*, October 2006 (hereafter SSFL Panel Report), p. 8. <http://www.ssflpanel.org/files/SSFLPanelReport.pdf> The SSFL Advisory Panel was established at the initiative of local legislators in the early 1990s to oversee independent health studies of SSFL and the surrounding areas. Under its auspices, federally-funded worker studies by the UCLA School of Public Health were conducted in the 1990s, and in the next decade a series of studies about potential offsite effects funded by the State Legislature were prepared. This summary of the siting and accident history is drawn in part from the Panel's 2006 report; the reader is referred to the full report for more detail and supporting citations, which is incorporated herein by reference.

² SSFL Panel Report, pp. 8-9.

³ *id.*, p. 8.

Second, the risk-based screening levels used by DOE for the Revised LUT Alternative were taken directly from the SSFL Standardized Risk Assessment Manual (SRAM) (MWH 2014) that has been approved by DTSC for use in risk assessment applications at SSFL. Therefore, DTSC approved risk-based screening levels that were used in developing the Cleanup to Revised LUT Values Alternative in this EIS. These risk-based screening levels are consistent with the future use of SSFL as open space. This future use is established in two Grant Deeds of Conservation Easement and Agreements (conservation easements) The Boeing Company (Boeing) and North American Land Trust recorded with Ventura County in 2017 (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

DOE did not address alternative methods of soil transport in the EIS because DTSC was in the process of completing the required study at the time of EIS release. DTSC's transportation study (DTSC 2017) concluded that Woolsey Canyon Road was the only viable means of transport from SSFL.

Chapter 3, Sections 3.9.5 and 3.9.6, of the EIS provide information about accidents at Area IV, including the 1959 SRE accident. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer. Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the two experts was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks

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measure because of convenient drive times from nearby universities. To compensate for the poor site conditions, and because the reactors would have no containment structures, a reactor power limit was set to limit radioactive inventory. But a decade thereafter, the AEC chose to build the Sodium Reactor Experiment (SRE) with power twenty times the limit, despite people living much closer than the original rule recommended.⁴

Poor environmental and safety practices resulted in at least four of the reactors suffering significant accidents, including a partial nuclear meltdown.

First, in March of 1959, the AE6 reactor released fission gases as a result of malfunction. Then blockage of coolant precipitated a power excursion and partial meltdown of the SRE in July 1959. The SNAP8ER accident damaged 80% of its fuel in 1964. A similar accident in the SNAP8DR resulted in damage to a third of its fuel in 1969.⁵ None of these reactors had a containment structure like modern reactors to prevent radiological releases into the environment.



photo source: DOE; labels: SSFL Work Group⁶

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from the accident, but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

⁴ *id.*, pp. 8-9.

⁵ SSFL Panel Report, p. 10.

⁶ <https://energy.gov/em/energy-technology-engineering-center>;
<http://www.ssflworkgroup.org/about-ssfl/>

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The events of June, 1959 at the SRE are emblematic of the problems caused by a troubled safety culture at SSFL.⁷ On that date, a fuel rod at the SRE, coated with sodium, exploded when it was washed with water in a "wash cell." The explosion lifted the shield plug out of the wash cell, and created "extremely high contamination levels within the entire building."⁸ A couple of weeks later, on July 13, the SRE experienced a power excursion—the reactor power suddenly began to increase exponentially, out of control, and the reactor barely was able to be shut down, or "scrammed." Yet, inexplicably, the operators of the reactor, unable to figure out what had caused the incident, started it up again two hours later, and continued to operate it for another week and a half, in the face of rising radioactivity readings (off-scale) and numerous other signs of reactor in trouble. When it was finally shut down, it was determined that 13 of 43 fuel elements had experienced melting.

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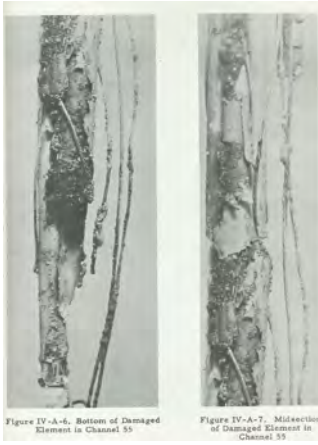


Figure IV-A-6. Bottom of Damaged Element in Channel 55

Figure IV-A-7. Midsection of Damaged Element in Channel 55

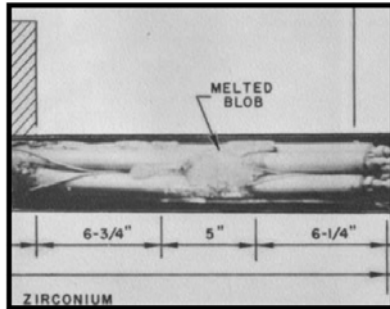
⁷ See, e.g., the review of the SRE accident performed for DOE by Dr. Thomas Cochran of NRDC, *Sodium Reactor Experiment Partial Fuel Meltdown*, 29 August 2009, <http://www.etc.energy.gov/Library/Main/Cochran%20SRE%20Presentation.pdf>

⁸ See Committee to Bridge the Gap, *Past Accidents and Areas of Possible Present Concern Regarding Atomic International*, January 18, 1980, and the citations therein. (Atomic International was the name of the AEC contractor running the nuclear portion of SSFL at the time.)

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Photo of Damaged Fuel Element; source: AEC/Atomics International



SRE Fuel "Melted Blob" (label in original); source: AEC/Atomics International

The accidents at the SRE, SNAP8ER and SNAP8DR all involved running the reactors for extensive periods of time while they were failing, despite clear indications of problems. As an AEC analysis⁹ of the SRE partial meltdown concluded:

[S]o many difficulties were encountered that, at least in retrospect, it is quite clear that the reactor should have been shut down and the problems solved properly. Continuing to run in the face of a known Tetralin leak, repeated scrams, equipment failures, rising radioactivity releases, and unexplained transient effects is difficult to justify. Such emphasis on continued operation can and often does have serious effects on safety and can create an atmosphere leading to serious accidents. It is dangerous, as well as being false economy, to run a reactor that clearly is not functioning as it was designed to function.

Nonetheless, the same pattern of continuing to operate reactors for long periods despite evidence of failing cores subsequently resulted in significant fuel damage in two other reactors at the site.

The problem of cutting safety corners was compounded by a culture of secrecy and a lack of candor. The AEC said nothing publicly about the SRE partial meltdown for

⁹ T. J. Thompson and J. G. Beckerley, *The Technology of Nuclear Reactor Safety*, prepared under the auspices of the US Atomic Energy Commission, 1964, p. 644

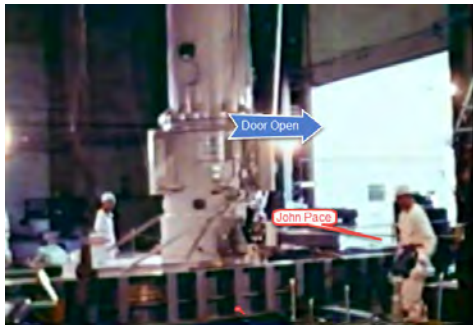
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nearly five weeks. Finally, it issued a news release, embargoed for Saturday morning papers, saying that "a parted fuel element had been observed," that there were no indications of unsafe operating conditions and no radioactive release. However, in fact, the fuel had experienced not just parting, but melting. A third of the core underwent partial melting, not just a single fuel element. It was a clear indication of unsafe operating conditions, and radioactivity had been intentionally vented into the atmosphere for weeks.

Despite subsequent claims that only noble gases were released, independent experts have concluded that other radionuclides such as iodine-131 could have been vented into the atmosphere. One estimate is that over 260 times the I-131 released at the Three Mile Island accident could have been emitted by the SRE.¹⁰ The reactor had no containment structure; because of the coolant blockage, the coolant vaporized, and volatile radionuclides like iodine, cesium and strontium could have been emitted into the core cover gas, which was deliberately vented from the reactor and into the environment. Furthermore, a report by an eyewitness, John Pace, indicates that the reactor room became so radioactive that the large equipment door had to be kept open to vent radioactivity from the room to the outdoors.¹¹



¹⁰ Declaration of Arjun Makhijani, Ph.D., President of the Institute for Energy and Environmental Research, in *Lawrence O'Connor et al. v. Boeing North American, et al.*, U.S. District Court for the Central District of California, February 12, 2004, p. 24.

¹¹ <http://data.nbcstations.com/national/KNBC/1a-nuclear-secret/> The above photograph is from an AEC film about the accident, taken during the recovery operation. The labels have been added. Pace says the door had to be opened for extended periods during the accident itself because of high radiation readings.

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By no means was the SRE partial meltdown the only problem at SSFL that led to releases. Much of the work at SSFL involved radioactively contaminated liquid sodium coolants for reactors, which burn if exposed to air and explode in the presence of water. There were radioactive fires at the hot lab and numerous other radioactive and chemical releases and spills. In addition, for decades, despite requirements to the contrary, radioactive and toxic chemical wastes were burned in open "burnpits." The resulting clouds of airborne contamination fell out over wide areas, including beyond the SSFL boundaries.

These and many other activities resulted in widespread radioactive and chemical contamination of air, soil, groundwater and surface water. Contaminants have repeatedly migrated offsite. The Los Angeles Regional Water Quality Control Board has fined Boeing more than a million dollars for scores of violations of pollution discharge limits for surface water leaving the SSFL site.¹²

DOE reports in its DEIS that the majority of the contamination is from over a hundred toxic chemicals. It has not explained how it managed to produce so much chemical contamination in addition to the radioactive pollution, and should do so. Some of the widespread chemical contamination likely came from the decades of open-air burning of wastes with toxic chemicals in burnpits, with the toxic plume spreading widely and resulting in airborne deposition. Any other poor practices that led to the chemical pollution should be disclosed.

A federally-funded study by the UCLA School of Public Health found markedly increased rates of death from key cancers for workers associated with their exposures.¹³ The most highly exposed workers had triple the deaths from those cancers as did less exposed SSFL workers.

A subsequent federally funded study by a team of researchers led by UCLA's Professor Yoram Cohen found evidence of contaminants having migrated outside the site boundaries and exposing the public at levels in excess of EPA levels of concern.¹⁴ A study by Dr. Hal Morgenstern of the University of Michigan, also federally funded, found

¹² Summarized, with citations to Regional Board Orders, at <http://www.ssfworkgroup.org/files/Fines%20for%20Violations%20of%20Pollution%20Laws%20at%20SSFL.pdf>

¹³ Morgenstern, Froines, Ritz and Young, *Epidemiologic Study to Determine Possible Adverse Effects to Rocketdyne/Atomics International Workers from Exposure to Ionizing Radiation*, June 1997, at http://www.ssfpanel.org/files/UCLA_rad.pdf. See also *Santa Susana Field Laboratory Epidemiological Study: Report of the Oversight Committee*, September 1997, at http://www.ssfpanel.org/files/panel_worker_radiation.pdf

¹⁴ Yoram Cohen, et al., *Potential for Offsite Exposures Associated with the Santa Susana Field Laboratory*, February 2006, at <http://www.ssfworkgroup.org/potential-for-offsite-exposures-associated-with-ssfl/>

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72-8 A number of the statements in this comment are mistaken or misleading. First, the characterization studies that identified the locations of chemicals and radiological constituents exceeding the AOC LUT values in Area IV, but did not find "widespread" contamination from Area IV. EPA did not observe (HGL 2012b) widespread contamination and DTCS's evaluation of the data showed that the contamination remains primarily within Area IV (DTSC 2017a). The statement regarding violation of surface water discharge limits is general and does not provide information regarding Area IV. There have been no violations of stormwater limits from Area IV in recent years, particularly since the installation of stormwater control systems. See Section 2.7 of this CRD, "Offsite Impacts," for additional details regarding stormwater. DOE also notes that Boeing is responsible for the management of stormwater on its properties.

While DOE does agree that the majority of the constituents exceeding AOC LUT values in Area IV are chemicals (not radionuclides), neither the Draft nor this Final EIS presents this as being from "over a hundred toxic chemicals." The LUT published by DTSC lists 116 chemicals. DOE is not aware of why DTSC selected those 116 chemicals. Of the 116 chemicals listed by DTSC, only 62 were consistently (greater than 1 percent) identified in Area IV soil samples. Of those 62, 52 of the chemicals have a natural origin, meaning that some of them are present in Area IV independent of any DOE operations. The remaining chemicals are man-made. There were no burn pits in Area IV used to routinely burn wastes. The possible sources and causes of environmental contamination in Area IV have been addressed in other documents, including some referenced in this EIS (HGL 2012a, Sapere 2005). This EIS properly considered the contamination that exists at the site today and evaluates alternatives for remediation that would leave the site in a safe condition for its future use as open space.

72-9 DOE acknowledges that there have been numerous past studies of potential worker and human health impacts resulting for operations at SSFL and notes that different studies come to different conclusions and/or acknowledge uncertainty in the results. The older studies evaluate past operational conditions and not all of them distinguish between the areas at SSFL. More important than these past studies are the current conditions in Area IV and the NBZ, proposed remedial actions, and the potential onsite or offsite impacts that are considered and evaluated in this EIS.

The cited UCLA School of Public Health study (UCLA 1997), one of a number of studies that has looked at worker impacts, states that the "study indicates that occupational exposure to ionizing radiation among nuclear workers at Rocketdyne/AI has increased the risk of dying from cancers of the blood and lymph system. Despite the small numbers of deaths from these cancers in workers with relatively high doses,

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a greater than 60% increase in incidence of various cancers in people living near the site associated with their proximity to it.¹⁵

SSFL is located atop the Santa Susana mountains overlooking significant populations in the City of Los Angeles and elsewhere. The site is contaminated with a wide range of radioactive materials, such as plutonium-239, cesium-137, and strontium-90, and over a hundred hazardous chemicals, such as dioxins, PCBs, heavy metals, and volatile organic compounds. Contaminants at the site can migrate offsite and expose those communities. Thus, the cleanup of the source of pollution above these communities is critical to their health. The issue thus is not merely a question of exposure to people at the site in the future, but to the people who live nearby. As we shall show, the failure to recognize this is a fundamental failure of the DEIS.

2. DOE's History of Resisting Its Cleanup Obligations

Along with the history of weak environmental and safety controls at SSFL, the AEC – and its successor the DOE – have long resisted doing anything more than a minimal cleanup of the contamination for which it was responsible, at this or its other polluted facilities across the country.¹⁶

After incidents like the Rocky Flats fires in the 1970s, the Three Mile Island meltdown in Pennsylvania in the late 1970s, and the 1986 Chernobyl accident in the former Soviet Union raised concerns with the widespread environmental and safety problems throughout the DOE nuclear complex nationwide, tentative attempts at reform were undertaken. Reviews were undertaken of environmental problems at DOE sites; one performed by DOE contractor (and thereafter, NRDC engineer) James Werner found widespread chemical and radioactive contamination at SSFL.¹⁷ Admiral James Watkins was brought in as Secretary of Energy to attempt to change the troubled “safety culture” at DOE. In 1991 an investigative “Tiger Team” team found significant problems in the safety and environmental program at SSFL.¹⁸ In 1995, in an effort to bring DOE into the modern era of environmental regulation, it entered into a Joint Policy with the U.S. EPA

¹⁵ Hal Morgenstern, et al., *Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California*, March 2007, at <http://www.ssflworkgroup.org/files/UofM-Rocketdyne-Epidemiologic-Study-Feb-2007-release.pdf>. See also, Professor Hal Morgenstern letter to Senator Joe Simitian, then-Chair, California Senate Committee on Environmental Quality, April 5, 2007, summarizing his findings, at http://www.ssflworkgroup.org/files/LettertoSen.Simitian_041507.pdf

¹⁶ See, e.g., National Governors Association, *Cleaning Up America's Nuclear Weapons Complex: 2015 Update for Governors*.

¹⁷ Environmental Survey, Preliminary Report, DOE Activities at Santa Susana Field Laboratory, February 1989; DOE/eh/OEV-33-P.

¹⁸ http://www.etece.energy.gov/Library/Main/DOE-EH-0175_ES&H_Tiger_Team_Assessment_of_ETEC.pdf

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we observed associations for both external and internal radiation, and these associations are not likely to be chance findings...” A subsequent study by the International Epidemiology Institute (IEI 2005) found “A slight non-significant increase in leukemia (excluding CLL [chronic lymphocytic leukemia]) was seen among radiation workers, although a similar non-significant increase in CLL (a malignancy not associated with radiation) was also observed. A slight non-significant increase in kidney cancer and a slight non-significant decrease in bladder cancer were also seen among radiation workers.”

The Professor Yoram Cohen study did evaluate and identify various modes by which chemical and radioactive constituents migrated from SSFL during the period of operation. However, much of the information in the study is not relevant to DOE's current efforts to remediate Area IV and the NBZ as operations have not occurred for nearly two decades. If one is to use this study, it is appropriate to consider some of the details. The study states, “This study suggests that the major contaminant of concern is TCE...” but also identifies other chemicals and radionuclides. As shown in this EIS, there are TCE groundwater plumes in Area IV for which DOE is responsible. As described in Chapter 3, Section 3.4, DOE there is no longer a source of TCE in the soil above these plumes and the plumes do not extend off of SSFL. Remediation of these plumes is addressed in this EIS. The study also refers to radionuclides in soils of the Brandeis-Bardin Institute and notes that they were above health-based standards. But in footnotes, the study clarifies that the subject land is now part of the NBZ and that the health-based standard was based on a resident farmer scenario which is not applicable to the NBZ. As discussed in the response to comment 72-6, Area IV and the NBZ are part of land that is to be protected as open space in accordance with conservation easements filed with Ventura County (Ventura County 2017a, 2017b). Based on use of the future land use as dictated by the easements, the analysis in this final EIS shows that constituents in the NBZ would meet health-based standards (soil RBSLs). It should also be noted that a 2017 study regarding SSFL contaminants on Brandeis-Bardin property concluded, “While chemicals within the undeveloped portions of the Brandeis Bardin property bordering SSFL may exceed background...they do not exceed their respective risk-based screening levels,” “Contamination at SSFL does not pose a health threat to users of Brandeis Bardin Institute, or other off-site areas,” and “The Brandeis Bardin Campus is safe for use by campers, visitors, students, faculty, administrators or staff.”

Most relevant to the current conditions and the evaluation of remediation in this EIS are the results of more recent data and studies. The EPA characterization studies (HGL 2012a, 2012b) demonstrated that Area IV is not widely contaminated or contaminated

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committing that all DOE nuclear sites in the country, irrespective of whether they were on the National Priority List, would be cleaned up consistent with EPA's CERCLA (Superfund) guidance.¹⁹ However, significant elements within DOE continued to resist these efforts at reform.

A clear example of this resistance can be found in the cleanup standards for the site. To wit, despite these critical findings and despite the Joint Policy entered into with EPA to carry out environmental remediation pursuant to EPA's CERCLA guidance, in the late 1990s, DOE and its contractor Boeing put forward cleanup standards for SSFL that were orders of magnitude more lax than the EPA CERCLA guidance and which would have left virtually all of the contamination not cleaned up.²⁰ In January 2002, DOE issued a Draft Environmental Assessment, and in 2003 a final Environmental Assessment and Finding of No Significant Impact approving those standards and its plan to leave substantially more than 90% of the radioactive contamination unremediated.²¹

Concerned about the plan to not clean up the great majority of the contamination and the failure to examine the environmental impacts of the harms associated with such weak cleanup choices, the City of Los Angeles, the Natural Resources Defense Council (NRDC), and the Committee to Bridge the Gap (CBG) filed a lawsuit in U.S. District Court, challenging the legality of DOE's actions under the National Environmental Policy Act (NEPA), 42 U.S.C. §4321, et seq. In 2007, in an Order highly critical of DOE, Judge Samuel Conti, granted summary judgment for the plaintiffs and against DOE.²²

In 2007, Judge Conti ruled against DOE. He noted, "Area IV is known to be radiologically contaminated and, in fact, was the location of at least one well-known nuclear meltdown....It is located only miles away from one of the largest population centers in the world....Among the primary purposes of NEPA, and the EIS process more specifically, is assuring the public is informed and aware of the potential environmental impacts of government actions....It is difficult to imagine a situation where the need for such an assurance could be greater." He therefore permanently enjoined DOE from "transferring ownership or possession, or otherwise relinquishing control over, any portion of Area IV until it completed an EIS and issued a Record of Decision pursuant to NEPA." The Court retained jurisdiction over the matter until it is satisfied that the DOE has met its legal obligations related to the remediation.

¹⁹ DOE & EPA, Policy on Decommissioning Department of Energy Facilities Under CERCLA, May 22, 1995, hereafter DOE-EPA 1995 Joint Policy.

²⁰ Approved Sitewide Release Criteria for Remediation of Radiological Facilities at the SSFL, December 12, 1998.

²¹ The EA was restricted to issues related to cleanup of radioactivity, recognizing that the cleanup of the chemicals was subject to the Resource Conservation and Recovery Act (RCRA) and those cleanup decisions were in the hands of the California Department of Toxic Substances Control.

²² 2007 WL 1302498 (N.D. Cal).

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with a wide range of radionuclides. EPA's data show that strontium-90, cesium-137, and plutonium 239/240 were the most frequently observed radionuclides comprising more than 90 percent of the detections. As discussed in comment response 72-8, there are far less than 100 chemicals observed in Area IV soil samples. Risks to an offsite resident following cleanup of Area IV and the NBZ from material that potentially migrates from Area IV and the NBZ following cleanup would be less than those assessed for someone residing directly on the site. Regarding potential groundwater contamination, The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

As described in response to comment 72-1, DOE conducted historic operations under the laws and regulations applicable at the time.

The commenters are mistaken in stating that DOE has resisted doing cleanup within Area IV. More than 150 structures have been removed and there are numerous examples of soil cleanup actions (see response to comment 72-1.) Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

As the commenters state, this Final EIS is being prepared to comply with an order by the U.S. District Court for Northern California, which permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued ROD(s). There are valid reasons for delays in preparing this EIS. Subsequent to the court issuing the order, DOE and DTSC signed the 2010 AOC. In accordance with the AOC, and in response to comments DOE received during scoping activities, an extensive characterization effort was undertaken. DTSC and EPA characterized offsite locations to establish background levels of chemicals and radionuclides, respectively. DOE and EPA sampled and analyzed soil and sediments in Area IV and the NBZ for chemicals and radionuclides, respectively. These characterization data, as well as data collected on groundwater, were essential to defining a range of alternatives for cleanup of Area IV and the NBZ.

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Shortly thereafter, DOE issued a Notice of Intent to prepare an EIS. However, DOE dragged its feet for a decade and only now has issued the DEIS for comment.

3. The 2007 and 2010 Cleanup Agreements

a. The 2007 Consent Order

In 2007, the California Department of Toxic Substances Control (DTSC), which regulates toxic chemicals in California pursuant to federal delegation under the Resource Conservation and Recovery Act (RCRA), entered into a Consent Order with DOE and the other SSFL Responsible Parties (Boeing and NASA) in which the Responsible Parties were obligated to complete cleanup of soil and installation of the permanent groundwater remedy by mid-2017.²³ Contrary to the DEIS's claim at p. 1-4, that Consent Order does not mandate a cleanup to suburban residential standards but instead requires cleanup to normal DTSC procedures.²⁴ Those procedures, as shall be discussed shortly, rely on current County zoning and General Plan land use designations, which in the case of SSFL, allows a wide range of agricultural and residential (with garden) uses and would result in the most protective cleanup standards being employed, comparable, DTSC has written, to a cleanup to background.²⁵

b. The 2010 Administrative Order on Consent (AOC)

In 2010, in the face of mounting frustration by DTSC, the California Environmental Protection Agency (CalEPA), and state and federal legislators with what appeared to be continued foot-dragging by DOE mid-level personnel, Dr. Steven Chu, the Nobel-Prize winning physicist who was then the Secretary of Energy, and Dr. Ines Triay, the DOE Assistant Secretary for Environmental Management, proposed to the state that they enter into an agreement whereby the site would be cleaned up to local background; i.e., remove all the detectable contamination and return it to the condition it was in before DOE contaminated it. Over that year, there were numerous negotiating sessions with DOE and the state, with participation from some of the parties to the successful 2007 NEPA lawsuit, to hammer out the written agreement, first an Agreement in Principle (AIP) and then the full Administrative Order on Consent (AOC), which incorporated the AIP. After two rounds of opportunity for public comment, in which more than 3000 comments were received, of which all but a handful were strongly in favor, DTSC and DOE executed the AOC in December, 2010. The AOC resolved the primary concerns that had resulted in the filing of the action before Judge Conti in the first place.

²³ Consent Order, p. 20.

²⁴ The word "residential" appears in the Order only to describe the existence of residential areas near the facility, and never to specify a cleanup standard for SSFL.

²⁵ DTSC, Response to Comments, Agreements in Principle, State of California and the Department of Energy, of California and the National Aeronautics and Space Administration, (hereafter DTSC Response to Comments on Agreements in Principle), October 26, 2010, Volume I, pp. 11-12, 14-7, 21.

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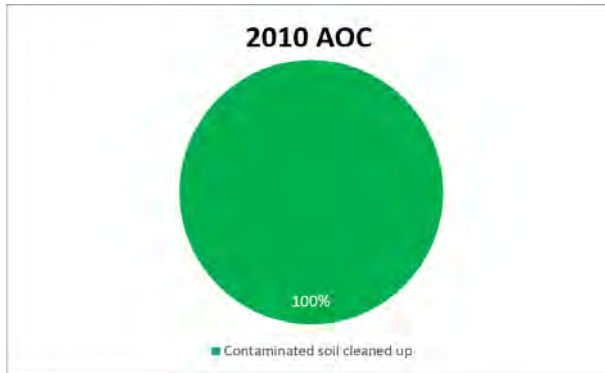
72-11 The commenters are mistaken in the assertion that the Consent Order requires a risk assessment based on future land use as agriculture or resident with garden. The Consent order only states that risk assessment would be based on the approved SRAM, which is what DOE followed considering the future use of the land. Risk assessments are based on the most likely future land use scenario, not zoning. County plans and land use designations are always subject to revision based on changes in land use. In addition, the Boeing Land Use Covenant prevents agricultural use of the land, so agricultural is not a potential future land use. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site, and firmly establishes the basis for establishing cleanup levels based on use of the land as open space. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

72-12 DOE has provided a response to the interpretation of the AOC and the commenter's discussion of commitments in response to comment 72-2. Please refer to the response to comment 72-2 for a discussion of DOE's actions.

In stating the quantity of contamination left behind under each alternative, the commenters have mistakenly correlated the soil volumes associated with each of the alternatives discussed in this EIS with a quantity of contamination. It is important to note that under all of the soil remediation action alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment, would be removed. Only soils that do not pose a risk to human health (or the environment) would remain.

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There are several key components of the AOC. (1) It is legally binding; DOE cannot unilaterally choose not to comply with any part of it. (2) Cleanup of soil shall be to local background. (3) For the purposes of the AOC, soil is defined to include structures, debris, and other anthropogenic materials. (4) There is to be no averaging; any contamination above background is to be cleaned up. (5) The deadline for full soil cleanup was 2017. (6) All waste with radioactivity above background must be disposed of in licensed or authorized low-level radioactive waste disposal facilities. (7) No risk assessment would be required, as the cleanup was to background. And (8) critically, no "leave in place alternatives will be considered."



Drs. Chu and Triay subsequently left DOE; the personnel who had frustrated past efforts at cleanup resumed their efforts; and *the deadline for completion of cleanup of soil and installation of the final groundwater remedy passed without either even starting*. In January 2017, DOE issued its DEIS. And in it, DOE broke its commitments in the AOC and its past promises about any EIS. Every alternative DOE presents in the DEIS would abandon in place large amounts of contamination, despite explicit prohibition against such a decision in the AOC. **Alternative 1 would leave in place 34-39% of the contamination; Alternative 2 would leave in place 86-91%; Alternative 3 would leave in place at least 90%, and perhaps as much as 95 or 99%; and Alternative 4 would leave 100%.** Furthermore, DOE also has broken its prior commitments that any EIS would be limited to different technologies that would conform to its obligations under the AOC to clean up all the detectible contamination, i.e., to local background, not whether to do so.

72-12
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Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

B. DOE VIOLATES PAST COMMITMENTS ABOUT EIS SCOPE, PURPOSE AND NEED

1. Scope of EIS Was to Be How to Meet the AOC, Not Whether to Comply

In 2011, NASA proposed an EIS that would have included numerous alternatives that would have violated the AOC. DTSC wrote to NASA that this was inconsistent with the AOC and demanded that it reverse course.²⁶

The matter was of such concern that Senator Boxer arranged a high-level meeting in Washington, D.C. with herself, the NASA Director, the Chair of the White House Council on Environmental Quality (CEQ), and the DTSC and CalEPA heads.²⁷ NASA asserted that the National Environmental Policy Act required it to evaluate alternatives that would breach the AOC.²⁸ The others disputed that notion, and it was agreed that CEQ, as the federal authority on NEPA, would issue an opinion.

CEQ issued that conclusion on June 19, 2012, finding that NEPA does not require the consideration of infeasible alternatives, and since NASA must comply with the AOC, alternatives that breach it need not be considered.²⁹ As the Chair of CEQ wrote, “there is no requirement that NASA consider alternatives that cleanup to other standards that differ from the agreement NASA signed with the State.” CEQ continued, “In view of NASA’s administrative cleanup resolution with the State of California, which turns upon NASA’s commitment to clean the site to local background levels, CEQ’s view is that – under this rule of reason – NASA is not compelled to consider less comprehensive measures as alternatives.” She noted further that “The Supreme Court has long recognized that CEQ’s interpretation of NEPA and its regulations is entitled to substantial deference.” NASA subsequently agreed to restrict its EIS accordingly.³⁰

In its efforts to get NASA to comply with the AOC in any environmental review, DTSC noted that DOE was preparing an EIS whose scope was consistent, looking at

²⁶ Letter from Debbie Raphael, DTSC Director, to Allen Elliott, SSFL Project Manager, NASA, September 19, 2011. See also letter from DTSC Director Raphael to NASA Administrator Bolden, May 22, 2012, demanding that “NASA modify the scope of its NEPA process to align itself with the project that NASA is actually undertaking – a cleanup to background levels of contaminants in compliance with the AOC – and not an evaluation of alternative cleanup standards that are not related to the project....”

²⁷ See letters of March 29 and 30, 2012, from Senator Boxer to NASA Administrator Bolden, and DTSC public announcement of March 30, 2012.

²⁸ See also letter of Allen Elliott to Debbie Raphael of August 9, 2011.

²⁹ Letter from CEQ Chair Nancy Sutley to Senator Barbara Boxer, June 19, 2012.

³⁰ See Allen Elliot, Program Director, SSFL, NASA, *Update on NASA’s National Environmental Policy Act Compliance for Santa Susana Field Laboratory*, July 19, 2012; and James Wright, NASA Associate Administrator, to DTSC Director Raphael, July 10, 2012.

72-13

72-13

The commenters do not include all of the guidance provided by CEQ in its letter on the NASA EIS. Although CEQ did say that feasibility is a consideration for identification of alternatives, CEQ also stated that “nothing under NEPA or CEQ regulations constrains NASA from looking beyond cleanup to background, even though some may consider the analysis unnecessary and inconsistent with the agreement.” CEQ also made it clear that NEPA regulations require agencies to “rigorously explore and evaluate objectively all reasonable alternatives, including reasonable alternatives that may not be ‘within the jurisdiction of the lead agency.’” DOE considers that alternatives that are consistent with the manner that EPA and DTSC conduct soil cleanups to be reasonable alternatives and thus have incorporated such into the Draft and Final EIS, even though some individuals may consider those alternatives beyond the jurisdiction of the lead agency.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

various ways to achieve the required cleanup to background, not whether to fulfill the requirements of the AOC. Citing DOE's April 2012 fact sheet for its DEIS process, DTSC noted that DOE had made it clear "that it is defining its project as a cleanup to background levels, as required by its AOC. DOE has been careful not to identify potential alternatives that do not meet its AOC cleanup objective."³¹

72-13
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Indeed, in May 2012, DOE issued a notice "Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement." In it DOE acknowledged that DTSC was the regulator and had the regulatory authority over the cleanup, that DOE was obligated to carry out the AOC requirement to clean up to background, and that the EIS would be limited to alternative ways to achieve that cleanup standard:

What is the cleanup standard (how clean must Area IV be upon completion of cleanup)?

DOE has signed two agreements with the California Department of Toxic Substances Control: the 2007 Consent Order for Corrective Action and 2010 Administrative Order on Consent for SSFL Area IV. Those agreements stipulate cleanup standards – how clean the site must be before cleanup can be declared completed. DOE is committed to full compliance with both the 2007 and the 2010 orders. However, neither Order dictates how DOE should accomplish the cleanup standards. For that reason, the EIS will explore if there are reasonable alternatives for accomplishing the cleanup levels that are stipulated in the Orders.

72-12
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DOE went on to say "DOE agrees that the AOC committed DOE to clean up to background," and that the EIS would therefore be restricted to how to do that. DOE stated that the "2007 and 2010 orders dictate how clean the site must be before the cleanup can be declared complete" but don't dictate how to achieve that level of cleanup. "[T]here may be more than one way to accomplish cleanup to background; DOE believes that it would be prudent to evaluate if there might be more than one way to accomplish the AOC's requirement of cleanup to background." In short, any EIS would be limited to analysis on how to achieve a cleanup to background, not whether to do so in the first instance.

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³¹ Raphael May 22, 2012 letter, *supra*.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

However, the DEIS that DOE just issued breaks those (previously) clearly articulated commitments. Indeed, every option examined would breach the AOC.³² DOE concedes this in the DEIS saying that the AOC

requires soil cleanup to the AOC LUT [Lookup Table] values, which are based on soil background levels or method/minimum detection limits. *DOE expects that, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required.*

(emphasis added)³³

2. The DEIS Has Shifted from Matters that Were Arguably within DOE's Discretion (How to Meet the Cleanup Requirements) to Decisions That Are Not Its to Make (Whether to Meet the Cleanup Requirements) and Ignores State Authority Over the Cleanup

NEPA is triggered by *discretionary* federal agency actions. It is to inform federal agency decisions. In 2012, DOE fully recognized that DTSC was the regulator and decision-maker about how much contamination DOE must clean up. As it wrote then in its April 2012 notice:

Who is the regulator for cleanup of Area IV at SSFL?

The California Department of Toxic Substances Control (DTSC) has the regulatory authority to direct the cleanup at SSFL.

In the DEIS as issued, however, DTSC is barely mentioned. As it is currently written, the DEIS suggests the decisions as to how much of DOE's contamination DOE must clean up are DOE decisions, not ones that it will reach under the purview of its regulator for the cleanup of chemical contamination. There is an occasional reference in the text (e.g., at p. S-12) that to undertake any of the alternatives DOE proposes, the AOC would be breached, but no real acknowledgment that that is not DOE's decision to make. The AOC is an enforceable contract between DOE and its hazardous waste regulator the DTSC, and DOE has no discretion to ignore its obligations under the AOC. And in that

³² In so doing, DOE now makes the same arguments NASA had originally made and which CEQ had rejected.

³³ DEIS, p. S-12. The DEIS identifies a total of four soil cleanup alternatives, one of which is characterized as a cleanup to AOC lookup tables, but with roughly half a million cubic yards of contaminated soil excluded from the cleanup to those requirements. All four alternatives are inconsistent the AOC, as conceded here in the DEIS.

72-12
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72-14

72-14 The commenters misinterpret the meaning of “discretionary” when it applies to a Federal agency’s requirement to assess the impacts of a decision (such as signing the AOC) versus the decision for cleanup. The purpose of the EIS is to fulfill the requirement for DOE to complete the NEPA process. This is an obligation separate from issues with the AOC and requires an analysis according to the parameters of NEPA. These include a full consideration of all reasonable alternatives to accomplish the goal of site remediation.

The authors of the AOC recognized the potential need for changing components of the AOC and included it in Section 8.0 of the AOC. This recognition is stated in Draft EIS Chapter 2, Section 2.2.1 where in order for an alternative to be implemented the AOC would need to be changed. DOE’s assessment of the AOC language is that the AOC cannot be implemented under its current form. DOE has discussed the implementability issues with DTSC and DTSC has identified some areas that could be changed. The Final EIS accurately notes in Chapter 2, Section 2.2.1, that the 2010 AOC allows (allowed by Section 8.0 of the AOC) DOE and DTSC to agree upon changes to better meet cleanup objectives. DOE expects that it would engage DTSC in discussions about such changes in order to implement any soil remediation alternative. (Please see Section 2.2, “Compliance with the 2010 Administrative Order on Consent” of this CRD).

Regarding the commenter’s statement that “DTSC is barely mentioned in the Draft EIS. In the 107 page summary, DTSC is introduced on page S-1 and identified on several pages, including; relative to the AOC, S-5, S-6, S-12 and S-16, in terms of DTSC’s regulatory role, pages S-13, S-22, S-25, S-26, S-28, S-30, and S-34 in terms of DTSC’s AOC involvement. DTSC is mentioned in about half of the pages of the 31-page Chapter 1 and DTSC is mentioned in 10 of the first 20 pages of Chapter 2 of the EIS.

Also, the statement that the Draft EIS has “morphed into a decision document” is wrong. The EIS is not a decision document. No decision is being made in the EIS. The analyses within an EIS are just one of many considerations to be used by decision-makers in making an informed subsequent decision.

The commenters are inaccurate with their statement that the DEIS is in “virtual silence about either the legally binding nature of the AOC or the existence of DTSC” and “the AOC is not even explicitly mentioned in the Introduction Section 1 as one of the requirements.” As shown above, DTSC is mentioned numerous times. The AOC and its details are discussed in Page 1-7 of Section 1. DOE is aware of the Joint Policy noted by the commenters. The commenter is mistaken in saying that all alternatives

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

AOC, DOE consents (and indeed, has no recourse to do otherwise) to DTSC regulatory authority over all aspects of the chemical and radioactive cleanup.

Bluntly, even absent the AOC, under RCRA, DOE lacks the authority to unilaterally decide how much of its chemical contamination to clean up, unless the State of California expressly cedes its authority to the federal agency entirely, which it has not done so, here or anywhere else. RCRA contains a waiver of federal immunity, so DOE must comply with it like everyone else; and RCRA authority has been delegated in California to DTSC. It is for that reason that DOE's 2003 Environmental Assessment did not even attempt to cover chemical cleanup decisions, acknowledging that that matter is within DTSC's authority. But in the DEIS, DOE says *it* will make a decision—issue a Record of Decision—about what cleanup option *it* chooses for its toxic chemical pollution. This is not a matter it gets to choose. DOE is the polluter, the regulated entity; the decision about how much of its pollution it must address rests with the regulator, DTSC, not the polluter.

A remarkable fact about the DEIS is its virtual silence about either the legally binding nature of the AOC or the existence of DTSC and its duly entitled state authority over the cleanup. In the DEIS, DOE essentially pretends it is the “decider,” free to choose to ignore the AOC at will and free to decide to leave as much of its pollution not cleaned up as it wishes. Neither is true.

For example, the AOC is not even explicitly mentioned in the Introduction Section 1.0 as one of the requirements DOE must meet, nor in the Purpose and Need for Agency Action (Section 1.1) on p. 1-1. In Chapter 9, identifying the requirements that DOE must follow, the AOC is relegated to a short reference under “Waste Management.” p. 8-3, 8-20. The AOC, of course, controls far more than waste management; it governs the entire cleanup.

Similarly, the DEIS simply ignores the fact that DOE can't choose to walk away from the AOC, that it is a contract with DTSC, and that in the AOC, DOE concedes to DTSC the power over the cleanup decisions. Additionally, DTSC's authority over the chemical cleanup pursuant to RCRA, even absent the AOC, is essentially ignored. DOE has drafted a DEIS as though the binding nature of the AOC and the authority of its regulator DTSC under the AOC and under RCRA don't exist.

A central failing of the DEIS is that it has morphed into a decision document for the central matters about how much it will cleanup, which is not DOE's to decide in the first place and something that is already done, per the AOC. The DEIS is essentially an assault on the state's authority under RCRA and pursuant to the AOC. DOE does not get to decide the very issues it has chosen to prepare the DEIS for, making it invalid.

Furthermore, even were there no AOC—and there is—and no DTSC regulatory authority over DOE—and there is—DOE would still be required to follow EPA CERCLA guidance for the cleanup of the radioactive and chemical contamination, pursuant to the 1995 DOE-EPA Joint Policy. All of the options DOE has put forward are

presented are at variance with EPA guidance. This EIS does include an alternative/ scenario consistent with the approach and process used by EPA in CERCLA cleanups (the Conservation of Natural Resources Alternative).

72-14
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at variance with that EPA guidance, in addition to breaching both the AOC and DTSC's RCRA authority.

3. Erroneous "Purpose and Need for Action" Statement in the DEIS

In 2012, DOE, noting that "NEPA requires a statement of the purpose and need for action in every NEPA document," defined the purpose and need as follows:³⁴

DOE needs to complete cleanup of Area IV and the Northern Buffer Zone in compliance with regulations, orders and agreements, *including the 2007 Consent Order (groundwater) and the 2010 Administrative Order on Consent (soil)*. The purpose of the project is to remove the remaining structures of Area IV of the SSFL and cleanup the affected environment in a manner that is protective of the environment and the health and safety of the public and Area IV workers.

(emphasis added)

However, the DEIS as issued has changed the "purpose and need for agency action" statement to now read:

DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements. To this end, DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers.³⁵

The explicit purpose and need to comply with the 2007 Consent Order for cleaning up groundwater and with the 2010 AOC for cleaning up soil has been dropped. This is no mere oversight, as indeed, all alternatives presented in the DEIS abrogate the AOC requirement of cleanup to background. The 2012 commitments have been breached, and the DEIS, rather than analyzing how to carry out the AOC cleanup to background, now merely presents four alternatives to breach it. The purpose and need statement must return to the 2012 promise, and any new iteration of the DEIS must comply with both the 2012 commitments and the AOC.

³⁴ DOE, Public Participation in the Development of Alternatives to be Considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement, May 2012.

³⁵ pp. S-2, 1-1.

72-14
cont'd

72-15

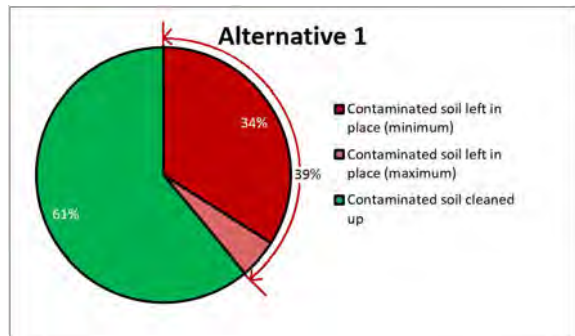
72-15 The specific wording of DOE's purpose and need has been refined since it was first stated in the 2007 Advance Notice of Intent, but the overall message expressed by the statement has remained consistent – DOE needs to remediate those portions of SSFL for which it is responsible in a manner that is protective of the environment and the health and safety of the public and workers. The change noted by the commenter in the statement does not change DOE's responsibility for complying with agreements, as well as with other requirements such as regulations and orders. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of assertions that none of DOE's alternatives would clean up Area IV and the NBZ in accordance with the 2010 AOC. As discussed in Chapter 2, Section 2.3.3, of this EIS DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC LUTs. As a consequence, and in keeping with its responsibilities under NEPA, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the environment and the health and safety of the public and workers. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4, of this EIS.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

C. All Soil Cleanup Alternatives Violate the AOC, DTSC RCRA Authority, and the 1995 DOE-EPA Joint Policy

We discuss each soil cleanup alternative below.

1. Alternative I – Which Leaves in Place 34-39% of the Contaminated Soil



While acknowledging in the DEIS that all alternatives breach the AOC, at other times DOE misleadingly suggests this first alternative is compliant with the AOC. It labels this option as cleanup to AOC Lookup Table (LUT) values. Yet DOE proposes to leave in place at least 480,000 cubic yards of the 1,413,000 cubic yards of soil contaminated above those limits, or 34%.³⁶ Because the DEIS says DOE also intends to assert an additional exception of up to 5% of total soil volume and leave that also in place, but hasn't included that leave-in-place volume in the totals,³⁷ this option, like all the others, can be an additional 5% higher, for a total of 39%, or 550,000 cubic yards, of the contaminated soil being left in place. As is repeatedly the case in the DEIS, there is no acknowledgment that DOE doesn't get to make that decision, that any such exceptions must comply with the AOC and must be approved by DTSC.

The AOC contains some very tightly delimited exceptions to the requirement to clean up all contamination to background.³⁸ Because DOE in the DEIS misrepresents them as it implies they allow it to leave in place more than half a million cubic yards of contaminated soil, reprinting the exceptions from the AOC here may be helpful:

³⁶ DEIS Summary, p. S-19.

³⁷ DEIS Summary, p. S-21.

³⁸ AOC, Appendix B, pp. 1-2.

72-16

72-16 The commenters are mistaken when they state that DOE acknowledges that all alternatives “breach the AOC.” The Cleanup to AOC LUT Values Alternative incorporates the technical elements of the AOC and DOE makes no claim that it “breach[es] the AOC.” The Cleanup to Revised LUT Values Alternative incorporates the technical elements of the AOC except that it substitutes RBSLs as soil cleanup standards. DOE recognized in the Draft EIS that DTSC would need to amend the AOC to allow substitution of the RBSLs as soil cleanup values. Please see the response to comment 72-1.

The commenters are inaccurate regarding their statement that the “AOC contains some very tightly delimited exceptions to the requirement to clean up all contamination to background.” The AOC exemptions are based first and foremost on DOE’s compliance with Federal, State, and local laws. The AOC, including application of the exemption process, does not affect compliance with laws. The limits to exemptions, per the AOC, are based on consultation with USFWS and determination of Native American artifacts formally recognized as cultural resources. There are no limits to volumes or acreages subject to the biological or cultural exemptions specified in the AOC. DOE did not misrepresent exemption areas and volumes in the DEIS. The areas and volumes are based on a series of meetings attended by USFWS, CDFW, and DTSC, and ongoing discussions with SHPO.

Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent” of this CRD for a discussion of this topic and DOE’s response. As stated in Section 2.4, DOE described proposed exemption areas in the Draft EIS and proposes a methodological approach to evaluation of chemical and radiological data to develop focused removal actions to be conducted within the proposed exemption areas with the oversight and participation of appropriate agencies. The EIS estimates of soil to be removed based on application of the exemption process are based on data available to develop the EIS and the volumes would be refined as detailed remediation plans are developed and implemented.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

SUMMARY: The end state of the site (the whole of Area IV and the Northern Buffer Zone) after cleanup will be background (i.e., at the completion of the cleanup, no contaminants will remain in the soil above local background levels), subject to any special considerations specified below.

- Clean up radioactive contaminants to local background concentrations.

Possible exceptions (*where unavoidable by other means*):

- The framework acknowledges that, where appropriate, DOE will engage in an Endangered Species Act (ESA) Section 7(a)(2) consultation with the U.S. Fish and Wildlife Service (FWS) over any species or critical habitat that may be affected by a federal action proposed to be undertaken herein on a portion of the site. Impacts to species or habitat protected under the Endangered Species Act may be considered as possible exceptions from the cleanup standard specified herein only to extent that the federal Fish and Wildlife Service, in response to a request by DOE for consultation, issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.

- The acceptance and exercise of any of the following exceptions is subject to DTSC's oversight and approval, and the resulting cleanup is to be as close to local background as practicable:

- Detection limits for specific contaminants exceed the local background concentration, in which case the cleanup goal shall be the detection limits for those specific contaminants.

- Native American artifacts that are formally recognized as Cultural Resources.

- Other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures. Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume.
(italics and underlining added³⁹)

72-16 cont'd

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³⁹ AOC, Appendix B, p. 1; there are identical exemptions for chemical contaminants on p. 2.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Thus, the only biological exception in the AOC to the requirement to clean up to background is if U.S. Fish and Wildlife Service issues a Section 7 Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site. The only cultural exemption is for formally recognized Native American artifacts, and DTSC must approve the exception. And the up to 5% “unforeseen circumstances” exemption also requires DTSC approval and exists only to the extent that the cleanup cannot be achieved through technologically feasible measures. Furthermore, no exception can be applied unless it is demonstrated to be unavoidable by other means and the resulting cleanup is as close to background as practicable. As shall be discussed below, none of the conditions necessary to trigger an exception has been met. In apparent recognition of this, DOE admits that this option, like all the others, is not in compliance with the AOC and for it to go forward, the AOC’s requirements would have to be altered.⁴⁰

72-16
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a. Proposal to Leave in Place 150,000 cubic yards of soil contaminated with TPHs and PAHs

DOE states that for all alternatives, it will leave in place 150,000 cubic yards of soil contaminated with Total Petroleum Hydrocarbons (TPHs) and Poly Aromatic Hydrocarbons (PAHs).⁴¹ It argues that these will be left in place to “naturally attenuate.” However, the AOC bars consideration of any leave in place alternative.⁴² The AOC expressly states, “No ‘leave in place’ alternatives will be considered.” Note that not only are leave in place alternatives prohibited from being employed, they are barred from even being considered.

72-17

DOE says natural attenuation could take up to 70 more years, whereas the AOC required cleanup in just a few years. If DOE did what it proposes, those contaminants would be left in place, available for offsite migration, for a lifetime. Given that the contamination was created as much as seventy years ago, it would thus have been not cleaned up for nearly a century and a half if DOE was able to breach the AOC this way.

72-17

The 2010 AOC allows for onsite treatment of soils (Section 2.9 Paragraph 5) and natural attenuation was included as a treatment option in the EIS for TPH-only soil at the suggestion of DTSC staff. The Draft EIS states that natural attenuation would be applied to soil with “low concentrations” of TPH’s where they are the only chemical exceeding comparison criteria. The study referenced by the commenters evaluated soil contaminants in addition to TPH and the study conclusions were based on the other contaminants. DOE is not proposing to use MNA for the chemicals that may take longer than TPH to degrade. The chemicals referred to in the comment that require 70 years degrade are complex polycyclic aromatic hydrocarbons, or PAHs, and these chemicals are not included within volume of soil designated for natural attenuation. See Chapter 2, Section 2.3.2 of this Final EIS for additional information.

But in fact the time period appears far longer. The source DOE cites for the 70 year estimate⁴³ merely refers to another source⁴⁴ for the number and correctly points out

⁴⁰ DEIS p. S-12.

⁴¹ DEIS p. S-21.

⁴² See p. 3, Appendix B, AOC. DOE tries to conflate the prohibition on “leave in place” alternatives with the prohibition on “onsite burial or landfilling of contaminated soil,” but these are separate prohibitions. DOE also appears to try to claim leaving it in place is onsite treatment, but it is of course just the opposite—no treatment at all, just leaving it there.

⁴³ CDM Smith 2015b.

⁴⁴ Nelson, et al. 2014.

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that this was based merely on a "Phase I literature search." In truth, the study relied upon (Nelson, et al. 2014) says the amount of time could be far longer, because the rates of attenuation slow dramatically after the easiest material degrades, which has already long ago occurred, and because site specific conditions of weathering also would tend to prevent degradation. The initial estimates were based on first-order approximations from the literature, but the report said site-specific studies were needed to determine likely attenuation rates at SSFL. As the Nelson, et al. study stated about the first-order estimate of ~70 years:

An important assumption in the above calculations was that the same first-order rate constant would be valid throughout the remediation period. As stated above, there are a couple of reasons this may not be a valid assumption: 1) The more easily biodegraded fractions of the hydrocarbon mixture will biodegrade first, leaving the more recalcitrant compounds towards the end, and 2) some fraction of the hydrocarbons will likely remain sequestered in the soil matrix and unavailable for biodegradation. For these reasons, longer remediation times than those calculated ... may be required at SSFL.

Nelson et al. concluded in that study, "It would be helpful to run microcosm experiments under conditions mimicking those at SSFL to get a better idea of potential biodegradation rates at SSFL."

Nelson and his team (their studies were performed under contract to DOE) followed up that Phase I literature search with actual tests for SSFL-specific conditions. Those measurements under SSFL actual soil conditions resulted in "essentially no change" in concentrations for any of the unamended samples tested.⁴⁵ Thus, the actual studies prepared for DOE do not support the claim that the TPHs at SSFL can be left to naturally attenuate. But even were the claim of 70-year attenuation periods correct—and they aren't—leaving the contamination in place for an additional 70 years would violate the AOC and pose continuing risks.

It is important to keep in mind that the DOE-funded Nelson studies were not aimed at natural attenuation but at identifying soil treatment options. The former is barred by the AOC but the latter, if it works effectively and quickly, is allowed. The Nelson studies concluded that natural attenuation wouldn't work but that more research should be conducted on possible methods of treatment. One of the failures of the DEIS is the failure to adequately address possible treatment methodologies.

The refusal to clean up these 150,000 cubic yards of contaminated soil but rather leave them in place thus violates the AOC's requirement that "no 'leave in place' alternatives will be considered, and they thus should not be considered.

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⁴⁵ See Nelson, et al. reports to DOE, DEIS references 296-300.

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b. DOE Also Intends To Avail Itself of An Additional Asserted Exception For 5%, or 70,650 Cubic Yards, of The Contaminated Soil Volume. Again Violating the AOC's Very Limited Exceptions

The AOC exception is limited to “unforeseen circumstances but only to the extent the cleanup cannot be achieved through technologically feasible measures” and requires DTSC approval. Remarkably, DOE is asserting now that it *foresees* claiming such *unforeseen* circumstances. DOE argues that deciding not to clean up contamination that is deeper than 5 feet below the surface would be among the requested unforeseen circumstances exception, even though there is nothing unforeseen about contamination being below 5 feet and that exception is limited to matters where cleanup cannot be achieved through technologically feasible measures, so it clearly doesn't apply.

Similarly, DOE's other example of not cleaning up in remote locations doesn't fit the exception, as it is neither an unforeseen circumstance nor is the cleanup not achievable by technologically feasible measures. And there is no showing that the application of the purported exception is unavoidable by other means. Finally, the AOC requires that even if an exception were granted by DTSC, the soil would still have to be cleaned up to as close to background as practicable. Instead, DOE just wants to walk away from cleaning up most or all of it. The DOE claim for “leaving in place” an additional 5% of the 1,413,000 cubic yards of contaminated soil thus violates the AOC in multiple ways.⁴⁶

c. DOE's Biological Features Exemption Claim Violates the AOC

DOE states that also for all alternatives, it will leave in place an additional 330,000 cubic yards of contaminated soil pursuant to what it implies are AOC exceptions for biological factors and cultural features.⁴⁷ However, the biological exception only occurs if the United States Fish and Wildlife Service (USFWS) issues a Biological Opinion that finds that the particular cleanup in a particular SSFL location would violate Section 7(a)(2) or Section 9 of the Endangered Species Act and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site, and the exception is unavoidable by other means.

No such USFWS Biological Opinion has been issued. The AOC exception does not apply.

And we note that the agency did issue a Biological Opinion a few years ago for EPA's intrusive radiation survey work that involved cutting back much of the vegetation

⁴⁶ The DEIS does not clearly spell out whether DOE intends to apply the 5% carve-out just for this alternative or for all. In the absence of DOE ruling it out, we here assume the 5% additional leave-in-place volume as part of the upper limit for all the DEIS cleanup alternatives.

⁴⁷ DEIS, p. S-21.

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In the Draft EIS, DOE did not identify any volume of soil that would be exempted using the AOC “unforeseen circumstances” clause. This soil would be identified during soil cleanup planning and would be discussed with DTSC before application of the 5 percent exemption.

As DOE develops the soil cleanup plans, and identifies locations that pose “unforeseen circumstances,” it may propose use of this exemption as necessary to prevent damage in remote locations or to avoid areas that are too risky for workers to access. DOE may also propose use of the exemptions for soil with constituents that are above the AOC LUT values, are deeper than 5 feet below ground surface, and do not threaten groundwater. DOE would discuss those locations with DTSC before incorporating the exemption into the soil remediation plan and the soil remediation plan would be subject to DTSC approval.

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The biological exemption process presented in the Draft EIS was developed jointly by DOE, USFWS, CDFW and DTSC during a series of meetings. Both USFWS and CDFW provided letters to DOE stating concurrence with the exemption process. The soil removal analysis in the Draft EIS included the results of applying the exemptions, the results of which were presented to USFWS, CDFW, and DTSC. The letter from DTSC cited by the commenters implying that DTSC was not involved in development of the exemption process is in error. DTSC staff were engaged in the development of the exemptions assumptions, process, the data, outcome of the analyses, and provided valuable input in application of the process. Appendix E, Consultations, provides the documentation on DTSC's involvement. For additional information on the exemption process, please refer to Section 2.4, “Application of Exemptions under the

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in the area.⁴⁸ USFWS approved, indicating in part that the activity would actually be helpful to the natural species by making possible cleanup of the environmental contaminants. The Biological Opinion further indicated that soil disturbance often helps the Braunton milkvetch, a federally listed species, but in any case measures such as tagging and avoiding plants or storing seeds and reseeded thereafter could be undertaken. The Biological Opinion concluded, further, that even were there a loss of a great majority of the Braunton milkvetch at Area IV and the NBZ, “adverse effects caused by this project will not occur throughout a significant portion of the range of the species (only plants in approximately 2 percent of the range of Braunton’s milkvetch would be affected by the project).” But in any case, mitigation measures can be undertaken.

DOE is attempting to get out of remediating the damage to the environment it has caused by decades of pollution by saying it now wants to protect biological features by not cleaning up the radioactive and toxic chemicals with which it contaminated them.

Further, the DEIS asserts that the contamination is concentrated around certain facilities.⁴⁹ But the biological features were long ago scraped away by DOE to construct those facilities; it is not pristine land, even leaving aside the contamination. Somehow, after decades damaging the SSFL land with radioactivity, toxic chemicals, and intensive industrial activity, suddenly DOE now claims that it shouldn’t have to live up to its commitments to remediate the damage it has done to those very biological resources.

Perhaps in recognition that the AOC’s narrow exception has not been met, DOE has tried to confuse the issue by speaking in the DEIS in broad terms about “conserving biological resources.” But that, of course, is not the actual AOC exception.

The DEIS lists nine federally and state-listed plant species, but then goes on to admit only two of them are known to exist in Area IV and the NBZ. DEIS p. 3-63. And DOE in the DEIS has tried to conflate the AOC exception, which is limited to a USFWS Biological Opinion barring a specific aspect of the cleanup as violating ESA, into a misleading effort to get the California Department of Fish and Wildlife (CDFW) to support DOE’s efforts to avoid complying with the AOC cleanup requirements.

On September 12, 2016, DOE wrote to CDFW misleadingly asserting that the AOC had a generic exemption for protection of biological resources and “to employ an exemption, DOE requires the opinion of the California Department of Fish and Wildlife that an exemption to the AOC soil cleanup is critical for protection of the species.”⁵⁰

⁴⁸ Biological Opinion for the Santa Susana Field Laboratory Area IV Radiological Study Project, Ventura County, California [EPA Contract # EP-S7-05-05] (8-8-10-F-12), May 25, 2010.

⁴⁹ DEIS, p. S-1.

⁵⁰ Letter from DOE’s John Jones to CDFW’s Mary Meyer, September 12, 2016, including Attachment A, “Supporting Analysis, Effects of Soil Remediation on Santa Susana Tarplant (*Deinandra minthornii*) in SSFL Area IV, August 25, 2016.

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2010 Administrative Order on Consent” of this CRD for a discussion of the process followed for employing exemptions. As stated in Section 2.4, DOE described proposed exemption areas in the Draft EIS and recognizes the fact that the proposed exemption areas are subject to refinement as planning and coordination with appropriate agencies proceed. DOE recognizes that areas subject to the exemption process do include areas that had been severely disturbed by development and have concentrations of chemicals or radionuclides that would need to be removed to protect human health. This is due to the location of severely disturbed previously developed areas adjacent to habitat that supports endangered species or cultural resources, as explained in Section 2.4 of this CRD. DOE proposes a methodological approach to evaluation of chemical and radiological data to develop focused removal actions to be conducted within the proposed exemption areas. Throughout this process there is oversight and participation of appropriate agencies so that the impacts to sensitive biological and cultural resources (as described in the Programmatic Agreement) are minimized while ensuring that chemicals and radionuclides that pose a risk to human health are removed. The proposed exemption areas would be considered in detail during preparation of detailed remediation plans which would include a detailed point-by-point analysis and site-specific plans for remediation using risk-based criteria to protect human health and careful remediation approaches to minimize unnecessary damage to sensitive species or cultural resources.

With regard to the number of State-and federally listed species reviewed in the EIS, the EIS preparers used consultation with USFWS and CDFW to identify the species that possibly occur on a site (based on their distributions, ecological requirements) before narrowing to species known or expected to occur on the site based on review of this information and field surveys. This rationale is explained further in Chapter 3, Section 3.5.5, “Threatened, Endangered, and Rare Species,” of this Final EIS. Tables 3-6 and 3-7 list plant and animal species that are known to be present within Area IV and the NBZ or the potential for occurrence of the species in the region of influence for each species.

With regard to the discussion about Santa Susana tarplant, its status as a rare species is because it was listed as rare under a law that preceded the California Endangered Species Act (CESA). It is currently protected under CESA as if it had been listed as an endangered or threatened species under CESA. With regard to the discussion about the species growing through cracks in pavement and on portions of the SRE site that had been subjected to “interim restoration” those are observations of the authors and other scientists and it is important to point out that it is unknown whether these plants or plants noted as established in Boeing restoration sites would persist

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DOE attached a very misleading document, purporting to show that there is no health risk whatsoever from not cleaning up the site and supposed extreme risk to the tarplant if it is. (The tarplant is not a federally listed species at all, and is not listed by the state as endangered or threatened, but is identified as rare.) Note that CDFW would have no way of knowing that the AOC exception is restricted to a specified narrow finding in a Biological Opinion by the U.S. Fish and Wildlife Service, not the CDFW, and that the standard DOE suggests is also far broader than that contained in the AOC.

Intriguingly, the DOE submission to CDFW indicates that the tarplant has thrived in formerly developed areas at SSFL where facilities were removed followed by interim restoration. It is conceded that the tarplant grows in previously disturbed areas ("including cracks in paved areas") and that "Boeing has had success at getting Santa Susana tarplant to reestablish at sites where soil has been removed as part of remediation." Area IV and the NBZ contain about 850 plants total, or about 2 per acre; it estimates an average of only about 13 plants per acre it proposes as exemption areas in Area IV. Clearly one could simply work around those few plants if one wished.

The core of the DOE assertions to CDFW is the claim that "With exceptions, these exceedances of LUT values are at a low level and do not warrant cleanup when human health and ecological receptor Risk Based Screening Levels (RBSLs) are used to determine where potential soil cleanup may occur." This statement, as will be shown in detail later, is false. DOE used human health RBSLs that are orders of magnitude higher (less protective) than the true RBSLs, and if it left the contamination in place as it proposes, the risks would far exceed human health RBSLs. And nowhere in the DEIS is there an analysis of the contamination compared to the ecological RBSLs. In fact, the cleanup standards DOE now proposes are also orders of magnitude higher than the ecological RBSLs.

In other words, in the guise of trying to protect biological features, DOE proposes to walk away from its obligation to clean up the radioactive and chemically toxic pollution with which it contaminated those features, and leave behind concentrations far above the established Risk Based Screening Levels for ecological receptors, let alone for human health.

None of this was explained to CDFW by DOE. On the day DOE issued the DEIS, DTSC's Director Barbara Lee wrote to DOE Assistant Secretary Regalbuto expressing significant dismay about DOE's misleading approach to CDFW, asserting that it was essentially violating the AOC.⁵¹ DTSC stated,

We are concerned that DOE is proposing cleanup actions inconsistent with the Administrative Order on Consent (AOC) between DOE and the Department of Toxic Substances Control (DTSC), and is basing these proposals on assumptions unsupported by needed data and analysis.

⁵¹ January 6, 2017, DTSC letter "Initial DOE Assessments Related to the Santa Susana Field Lab Cleanup."

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in these sites or would succumb to competition as stronger vegetation takes hold if the site is left undisturbed. The native rock outcrop habitat of this species on SSFL severely limits the growth of competing vegetation which, in turn, allows the tarplant to persist indefinitely. Hence, DOE acknowledges and appreciates the importance for the sustained presence of the Santa Susana tarplant of minimizing impacts to the native rock outcrop habitat.

DOE held coordination meetings with USFWS and CDFW with DTSC's participation on this project for several years and submitted a Biological Assessment to USFWS and CDFW, which initiated Section 7 Consultation under the Endangered Species Act. Appendix E, Table E-4, of this EIS provides a summary of meetings with USFWS and CDFW held by DOE to date, most of which involved participation by DTSC. In August 2018, the USFWS issued the Draft Biological Opinion relative to the AOC LUT cleanup alternative. DOE acknowledges that the areas in which the exemption process would be applied presented in the EIS are subject to refinement with the participation of USFWS, CDFW, and DTSC on the biological side and the California State Historic Preservation Officer, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes on the cultural resources side.

The 2010 Biological Opinion on the EPA radiological survey has very limited applicability to the present project as explained in Section 2.4 of this CRD. Cleanup of SSFL to AOC LUT values would have a far greater impact on listed species than the EPA projected because the soil remediation requires removal of vegetation and soils, including the seed bank, in the treated areas, a profound and difficult to mitigate impact, whereas the EPA action that was the subject of the 2010 Biological Opinion involved no removal of soils, leaving the soil seed bank intact, and trimming or mowing of vegetation, a much less severe impact, which leaves the potential for rapid recovery of the vegetation and habitat by re-sprouting or germination from the soil seed bank. The EIS estimates of soil removal and proposed exemption areas are based on data available to develop the EIS. These estimates would be refined as remediation plans are developed and implemented.

Section 3 – Public Comments and DOE Responses

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

First, and most importantly, we note that it appears DOE is proposing cleanup approaches that fail to fully recognize the AOC provisions that apply to sensitive plant and animal species located at SSFL. These provisions allow limited exceptions to cleanup activities to safeguard protected species. As you know, DTSC is committed to implementing and enforcing the AOC. DTSC requests DOE to discontinue early consultation until we can discuss with DOE and CDFW how the requirements of the AOC apply to this process.

Second, DTSC is concerned that DOE may not have supported its initial assessments of key issues with sufficient data and analysis.

Further, it does not appear that DOE has analyzed individual, location-specific approaches to minimizing and mitigating potential impacts to the Tar Plant and other sensitive habitat and resources consistent with the AOC.

We are also concerned that this consultation has been initiated without sufficient discussion with DTSC.

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In sum, DOE is attempting to claim a biological exception for which it does not qualify. That exception is only triggered by a USFWS Section Biological Opinion finding a proposed cleanup action on part of the property to violate specified sections of the ESA, with no reasonable and prudent measures or reasonable and prudent alternatives that would allow for the use of the specified cleanup standard in that portion of the site. No such USFWS Biological Opinion exists. No such showing of the unavailability of mitigation measures has been made by DOE. Cleaning up the radioactive and toxic damage DOE did to the SSFL environment would help biological features in the long run, not harm them.

The proposed exemption areas in the DEIS include some of the most contaminated areas on the property—for example, the SRE, site of the partial meltdown, and the burnpit.⁵² These areas are the opposite of pristine natural areas, and it is troubling that DOE would attempt to claim a biological exception for which it does not qualify under the AOC as a way of avoiding cleaning up among its biggest toxic impacts.

d. Cultural Features Exemption Claim

Additionally, the DEIS asserts an exemption that it describes as for cultural features, but the AOC exception is limited to Native American *artifacts* that have been

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⁵² DEIS, p. 2-23.

72-20 Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent” of this CRD for a discussion of this topic and DOE’s response. DOE also notes that it does not propose to exempt a “vast amount of the contamination from cleanup.” Within exemptions areas, DOE will remove any concentrations of chemical and radioactive constituents that pose a threat to human health and the environment. All three of the soil remediation action alternatives would be protective of human health.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

formally recognized. *The DEIS discloses in an appendix, however, that there are no formally recognized Native American artifacts in Area IV or the NBZ.*⁵³ Like its attempt to expand the narrow exception for a USFWS Biological Opinion to a shotgun set of claims about biological features generally, DOE similarly tries to inflate the narrow exception for formally recognized Native American artifacts to cover far broader claims not allowed under the AOC. Furthermore, this exemption is not in DOE's purview to declare; according to the AOC, DTSC must decide whether it is to be used. Again, DOE leaves out the fact that these decisions are not its to make.

A study performed by DOE for site cleanup found three small rockshelters and one bedrock mortar in Area IV, ineligible for formal recognition:

*Due to their failure to satisfy the criteria of inclusion, these four sites have been determined not eligible to the National Register of Historic Places. Based on this determination, the proposed closure and remediation program is determined to have no effect.*⁵⁴

A subsequent cultural features survey performed for the USEPA radiation survey identified some additional rockshelters and similar features and isolated small artifacts such as the mano stone, a few inches across, pictured below. These were flagged and either avoided during the survey or carefully collected and then returned to their original location, which could be done as well during the cleanup.⁵⁵



mano stone, source: DOE DEIS Ref. 465 (Corbett 2012)

What artifacts have been found – although none is formally recognized—have generally been quite small and isolated, whereby one can readily work around them or, as was done in the EPA survey, carefully collect and then return them. There is no basis, as

⁵³ Appendix F, F-16.

⁵⁴ W&S Consultants, *Class III Inventory/Phase I Archaeological Survey of the Santa Susana Field Laboratory, Area 4, Ventura County, California*, September 24, 2001 This reference is cited in the DEIS (reference 502) but the DOE link to it takes one to a statement that DOE is not making it available. We found it elsewhere.

⁵⁵ DOE DEIS Ref. 465 Corbett 2012.

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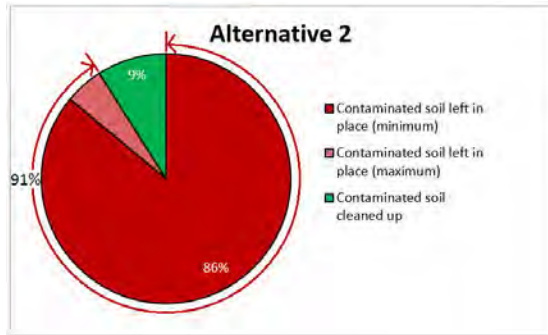
Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

DOE has done, to propose exempting a vast amount of the contamination from cleanup because of isolated small artifacts, which can be fully protected while also allowing the site to be returned to its natural state before DOE polluted it.

DOE states it will include a USFWS Biological Opinion, if issued, and information on cultural exemptions in the final EIS. Similarly, DOE suggests post-DEIS cultural feature efforts to declare exceptions based on future cultural feature considerations. But that of course prevents public review and comment in the NEPA process, amounting to a game of hide the ball. DOE has had years, indeed decades, to have obtained the Biological Opinion and any necessary Native American artifacts consideration, and its delay in doing so impermissibly shields from NEPA review the basis for cleanup exemption claims. One notes that EPA was able to timely obtain its USFWS Biological Opinion and its cultural features review for its activities at Area IV and the NBZ, and that neither Opinion indicated that the activity would cause an unacceptable impact and could be readily conducted in a way that was acceptable. DOE's efforts to exempt 330,000 cubic yards of contaminated soil from cleanup for purported biological and cultural reasons violates the narrow AOC exceptions and is unsupported upon careful examination.

Thus, Alternative 1 breaches the AOC and would, despite the prohibition on "leaving in place," leave in place 34-39% of the contamination. None of the exceptions that DOE cites are currently met.

2. Alternative 2 – Leave in Place 86-91% of the Soil Contamination



DOE characterizes this alternative as using alternative Lookup Table (LUT) values, alternative to those required by the AOC. As such, it is a direct violation of the AOC. The AOC requires cleanup to LUT values established by DTSC based on

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The commenters are misrepresenting the outcome of the Cleanup to Revised LUT Values Alternative. This alternative would involve removal all radionuclides above AOC LUT values and chemicals at a concentration exceeding a one-in-a-million cancer risk and hazard index of 1. There would be no averaging of soil and following soil cleanup Area IV would have less contamination than that left at EPA CERCLA sites and most DTSC sites in California. The commenters are wrong when they say the alternative "violates" "longstanding DTSC and EPA Guidance." This alternative involves greater cleanup than would occur under both agencies' guidance. The RBSLs proposed for the alternative were taken directly from the SRAM and are approved for use at SSFL by DTSC.

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background and detection limits. It is not up to DOE to set these values; it is solely DTSC's authority, pursuant to the AOC. Once again, DOE in its DEIS is usurping the authority of its regulator, DTSC, about a matter not in DOE's purview, and attempting to adopt cleanup values that violate the AOC.

The cleanup standards DOE now puts forward in this alternative violate the AOC, the 1995 Joint Policy with EPA, and longstanding DTSC and EPA guidance.⁵⁶ DOE estimates under this option, only 192,000 of the 1,413,000 cubic yards of contaminated soil would be cleaned up (leaving 86% in place). With the additional 5% exemption they are improperly assuming, but not including in the total, that means up to 91% could avoid cleanup.⁵⁷

The alternative LUT cleanup levels DOE proposes are orders of magnitude more lax than the AOC LUT values, as can be seen by comparing the AOC LUT values and the DOE proposed alternative RBSLs in Table D-3 of the EIS.⁵⁸ The thyroid disrupter perchlorate, for example, is supposed to be cleaned up to levels of 1.63 micrograms per kilogram. That is what DOE promised to do. Now it wants to leave concentrations as high as 53,300 micrograms/kg. That is 32,700 times higher. Dioxins, an extraordinarily toxic group of chemicals (2,3,7,8-TCDD TEQ) have a LUT value of 0.912 picograms/gram under the AOC. DOE instead wants to not have to clean the dioxins up until they reach a level of 4800 — more than 5000 times higher. Acenaphthene has an AOC LUT cleanup value of 2.5 microgram/kg; DOE wants to not clean it up until the level reaches 3,230,000, more than a million times higher.

⁵⁶ See, e.g., Land Use in the CERCLA Remedy Selection Process, EPA OSWER Directive 9355.7-04, and DTSC Response to Comments on Agreements in Principle, p. 11-12.

⁵⁷ As indicated above, the DEIS is not clear about whether DOE proposes to use the 5% purported "unforeseen circumstances" additional exemption for all three alternatives. This should be clarified.

⁵⁸ DEIS Table D-3, pp. D-8-11.

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72-22 First of all, DOE does not have a perchlorate contamination issue in Area IV soil. The highest perchlorate concentration observed in soil was 683 parts per billion. The RBSL for the suburban resident (no garden) for perchlorate is 53,300 parts per billion, so the perchlorate comment is moot.

The RBSLs used in the Draft EIS are comparable to soil cleanup standards applied by DTSC throughout California. Just because a chemical value is above background, does not make the chemical toxic. Therefore the order-of-magnitude comparison is not relevant. A garden pathway was not used in the RBSLs for this EIS, as residential development with garden is not a future land use for the SSFL property based on the Grant Deeds of Conservation Easement and Agreements. The use of RBSLs that do not include the indirect garden pathway is appropriate for this future land use.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

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Here are a few more examples:

Chemical	DOE Proposed Cleanup, Supposed Suburban Residential RBSL (mg/kg)	AOC Levels (mg/kg)	How much more of each chemical does DOE propose to leave? (Compared to AOC)
Bis(2-ethylhexyl)phthalate	173	0.061	2,836 times more
Naphthalene	14.6	0.0036	4,055 times more
2-Methylnaphthalene	162	0.0025	64,800 times more
Methylmercury	7.61	0.00005	152,200 times more
Pyrene	1650	0.0056	294,643 times more
Flouranthene	2,200	0.0052	423,076 times more
Benzo(g,h,i)perylene	1,650	0.0025	660,000 times more
Phenanthrene	16,400	0.0039	4,205,128 times more
Anthracene	16,400	0.0025	6,560,000 times more

A complete comparison of AOC LUT cleanup values for the more than one hundred toxic chemicals found to be elevated at SSFL Area IV and NBZ versus the levels DOE proposes to be permitted to leave behind is attached hereto.

DOE claims that under this alternative, it would clean up the chemical contaminants to what it purports is a risk-based standard. The standard it says it would use are Risk Based Screening Levels that it says are specified in the DTSC-approved Standardized Risk Assessment Methodology (SRAM). DOE in the DEIS claims the SRAM mandates the use of a suburban residential standard and that that is what DOE proposes to use in this alternative. Both assertions are incorrect. The SRAM does not mandate the use of the suburban residential standard as opposed to a more conservative rural residential standard. Furthermore, the RBSLs that DOE says it wants to use even for the suburban residential scenario are thousands of times less protective than the suburban residential RBSL in the SRAM.

The SRAM includes RBSLs for several scenarios, including not just the suburban but also the rural residential one. Generally, the latter would be the most protective standard, as it includes the greatest exposure. Under EPA and DTSC practice, one is to clean up to the exposure scenario that produces the greatest risk and which is allowed under current County zoning and General Plan designations.⁵⁹ As DTSC described the process⁶⁰:

⁵⁹ See, e.g., Land Use in the CERCLA Remedy Selection Process, EPA OSWER Directive 9355.7-04, and DTSC Response to Comments on Agreements in Principle, p. 11-12.

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72-23 Regarding the commenter’s statement that the “DEIS claims the SRAM mandates the use of a suburban residential standard” the Draft EIS makes no such claim. Regarding the commenter’s statement that the suburban residential scenario RBSLs used by DOE in the Draft EIS are “thousands of times less protective than the suburban residential RBSL in the SRAM”, the RBSLs used in the EIS are identical to the ones published in the SRAM. Regarding the commenter’s statement that “Under EPA and DTSC practice, one is to clean up to the exposure scenario that produces the greatest risk”, although zoning is a consideration for future land use, because zoning rules are always subject to change, the “reasonably anticipated land use” (as cited by the commenters) is the primary guiding factor. When DOE developed the Draft EIS, there were no plans for reuse of SSFL for agricultural purposes. And with the Boeing Conservation Easement, reuse of SSFL for agricultural purposes is prohibited.

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One of the primary assumptions that these calculations rely upon is the land use. The Superfund process requires the assumption to be based upon the reasonably anticipated land use. *The local government General Plan land designations and local zoning designations are the most reliable expressions of prospective land use.* OSWER Directive No. 9355.7-04, "Land Use in the CERCLA Remedy Selection Process," May 25, 1995, p. 2, 4-5. *DTSC and U.S.EPA, in implementing the Superfund process, defer to local governments' land use plans and zoning decisions, and base their cleanup level calculations on the assumption that the land will be used as the land use requirements would allow, irrespective of its current use.*

(emphasis added)

As DTSC said in 2010, its normal practice, even if there were no AOC or site-specific law, would be to require SSFL to be cleaned up to the rural residential/agricultural standard because that is what the site is zoned for and allowed under the General Plan:

Even absent SB 990 [an SSFL-specific statute], *DTSC, in implementing its cleanup authorities, would defer to local governments' land use plans and zoning decisions. In this instance, the Ventura County zoning maps specify that the site and much of the surrounding area are currently zoned as rural agricultural.* Carrying out the cleanup specified in the Agreements in Principle is consistent with both SB 990 and with local land use decisions.

(emphasis added)⁶¹

DTSC after analyzing various contaminants at SSFL, stated that such a cleanup using its standards for all sites in the state, i.e., relying on local land use designations, would result in a cleanup at SSFL essentially equal to a cleanup to background.⁶² Thus, a genuine risk-based cleanup would be the same as the AOC, whereas what DOE puts forward would leave on the order of 90% not cleaned up.

Ventura County in 2015 confirmed for DTSC that its land use designations for the property allow a wide range of residential (e.g., with gardens) and agricultural (rural residential) uses.⁶³ Thus, were there no AOC, any risk-based cleanup would have to be to the most protective of those exposure scenarios.

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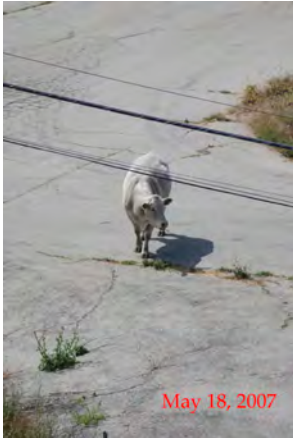
⁶⁰ DTSC Response to Comments, supra.

⁶¹ *id.*, p. 21.

⁶² *id.* pp. 14-17.

⁶³ Letter of July 20, 2015 from Kimberly L. Prillhart, Director, Ventura County Planning Division, to Mark Malinowski, DTSC.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap



Cow on SSFL Area IV source: William Preston Bowling



Cows grazing near Area IV⁶⁴ source: William Preston Bowling

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⁶⁴ The agricultural cleanup standards are designed to assure that, for example, cows are not grazing on grass growing in contaminated soil, so that those who drink the milk and eat the meat are not put at risk.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Throughout the DEIS, DOE claims it is using the suburban residential RBSLs from the DTSC-approved SRAM. However, buried in a footnote, DOE concedes it isn't using even the suburban residential standard, but only one aspect of a standard, not the standard *in totum*. Specifically, DOE, for its own purposes that are not identified, avails itself of only the direct contact aspect of the standard (e.g., getting some soil on your hand), and does not include the part of the suburban residential standard that is associated with exposure from consumption from backyard fruit trees or vegetable garden.⁶⁵ The backyard garden part of the suburban residential scenario is required to be included, barring some extraordinary situation (e.g., where soil conditions prevent anything growing).⁶⁶ DOE claims it is using only the direct contact part of the suburban residential scenario and excluding the backyard garden part per the SRAM. But the SRAM doesn't say that. In fact, it requires calculation of the backyard garden part of the risk and provides RBSLs for that component of the suburban residential standard.⁶⁷ Indeed, DTSC has recently directed Boeing that the backyard garden part of the suburban residential exposure pathway must be incorporated.⁶⁸

The significance of DOE claiming it is using a suburban residential standard but in fact using a standard that excludes the key component of that standard is that the RBSLs it purports are the suburban residential RBSLs are, for many chemicals, hundreds or thousands of times less protective than the actual suburban residential RBSL from the DTSC-approved SRAM. Here are a few examples (a complete comparison table is attached hereto).

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⁶⁵ See fn 32, p. S-21. (Note that it misrepresents the backyard garden scenario as requiring 100% of one's fruits and vegetables from the garden.)

⁶⁶ See, e.g., EPA's Preliminary Remediation Goals for radionuclides, <https://epa-prgs.ornl.gov/radionuclides/>

⁶⁷ Final SRAM, Rev. 2 Addendum, August 2014, , pdf pp. 1071- 1074 It also provides RBSLs for rural residential/agricultural exposures.

⁶⁸ Letter of August 23, 2016, from DTSC's Roger Paulson to Michael Bower of Boeing p. 3.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL VS. True Suburban Residential RBSL with Garden

Chemical	DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL (mg/kg)	True Suburban Residential RBSL with Garden (mg/kg)	How much more of each chemical does DOE propose to leave? (Compared to Suburban Residential RBSL with Garden)
Mercury	16.8	0.0504	333 times more
Methyl Mercury	7.61	0.00131	5809 times more
Cadmium	4.6	0.00165	2787.9 times more
Perchlorate	53.3	0.0158	3373.4 times more
Acenaphthene	3230	18.7	172.7 times more
Antimony	26.4	0.139	189.9 times more

Because a RBSL is defined as the concentration that will produce a cancer risk of one in a million or a hazard index of 1 for non-cancer risks, the right-most column above also tells one how many times above the risk goal DOE's desired standards are. In other words, DOE promised that its cleanup alternatives would leave behind a one in a million cancer risk and an acceptable risk from other health effects, but in fact its proposed standards would result in risks hundreds or thousands of times higher.

In addition to trying to adopt cleanup standards orders of magnitude higher than the promised AOC LUT values or even true suburban residential risk-based levels, DOE has used these grossly inflated RBSLs to eliminate completely from any cleanup 98 of the 116 toxic chemicals found contaminating its property – without explicitly disclosing so. Table D-3 of the DEIS gives LUT and purported RBSL values for 116 toxic chemicals, but in Table D-4, DOE shrinks the list of contaminants of concern for which there are cleanup levels under its alternative 2, “alternative LUT values,” to 18. The source from which Table D-3 is taken, CDM Smith 2017, identifies more than a hundred hazardous chemicals detected in Area IV and the NBZ at levels in excess of LUT values, i.e., contamination above background. Yet what DOE has quietly done is thrown out all chemicals that exceed LUT values but are below its purported RBSL values, which, as we have seen, are hundreds or thousands of times higher than true suburban residential RBSL values. In short, in alternative 2, DOE proposes to clean up only 18 of 116 contaminating chemicals, and for those that will be considered for cleanup, do so only if they reach levels orders of magnitude higher than the promised AOC LUT values or true suburban residential RBSLs, which includes a garden.⁶⁹

⁶⁹ We note that DOE is not even clear that it will clean up contamination that reaches the astronomical levels it purports are suburban residential RBSLs. Instead, it merely says a “cleanup decision” would be made if contamination is found over those levels.

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Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

DOE has no logical reason for the hidden exclusion of the backyard garden portion of the risk-based screening level, nor for excluding the agricultural/rural residential standards. For this alternative DOE states it would use the AOC LUT values for radionuclides but not for chemicals, with no rationale.⁷⁰ For chemicals, DOE proposes far less protective cleanup standards than required by the AOC LUT values. DOE states that for chemicals it will assume suburban residential exposures, but then excludes the garden component of the suburban residential standard. In support for this arbitrary exclusion, DOE states that Boeing wants to use the suburban residential standard without a garden for other portions of the site, citing to a letter in response to a letter by LA Supervisor Kuehl, LA City Councilmember Englander, and then-Senator Pavley to DTSC Director Lee (DOE includes the Boeing letter but not the electeds' letter to which it purportedly responds).⁷¹ But it is DTSC that decides Boeing's cleanup levels, not Boeing, and DTSC has told Boeing it cannot exclude the backyard garden part of the suburban residential standard but must include it in the total risk.⁷² And further, DTSC has said that in the establishing of cleanup levels it defers to local zoning and General Plan designations, which allow both suburban residential with a garden and agricultural/rural residential uses, as discussed above. There is thus no basis, even were it not bound by the AOC, for DOE to propose cleanup that wouldn't meet the agricultural/rural residential standard, nor the suburban residential standard with garden.

DOE, a Responsible Party (RP) under DTSC regulation, is relying on another Responsible Party's cleanup wish, when it is up to neither RP, but to the regulator. And the regulator's requirements are cleanup based on land use designations by the County, which allows agricultural/rural residential uses and also suburban residential with a garden.

DOE claims Boeing has stated that its desire is to place restrictions on the property [in perpetuity?] so it cannot be used for residences, backyard gardens, etc., but rather for open space. But DTSC and EPA procedures don't allow the Responsible Parties to avoid of cleanup obligations by declaring the property too contaminated for unrestricted use. If that were allowed, every polluter would simply do so and walk away from their obligation for cleanup. It is local land use authorities that determine what uses are allowable and thus, under regulator procedures, what cleanup standards apply.

Furthermore, DOE states in the DEIS that, despite Boeing's stated desire for the land to be open space, that couldn't be counted on, and for that reason, DOE would assume residential uses could occur and would set RBSLs accordingly. It is thus completely contradictory to assume a residential exposure scenario and then exclude a backyard garden on the grounds that Boeing says it intends to place restrictions so that it can't be used for residences or gardens. The Responsible Parties here don't get to have it both ways.

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⁷⁰ DEIS, p. S-30.

⁷¹ *id.*, p. 2-13, citing letter dated December 15, 2015.

⁷² Aug 23, 2016 ltr., *supra*.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Further, it is important to recall that a main reason for cleaning up SSFL is to protect the people who live or engage in agriculture nearby. Many of the homes have gardens; and cows graze now on contaminated grass next to and on the site. Someone drinks that milk, eats that meat. Even were SSFL restricted in its future use to non-residential or non-agricultural activity, the people living near it and subject to exposure to the migrating contamination are not.⁷³

Therefore, using cleanup standards based on suburban residential use with no garden, standards hundreds or thousands of times less protective than the true RBSLs for suburban residential with garden, puts at risk people who live nearby and who do have gardens, and all the agricultural uses. Even were there never a residence on SSFL, leaving contamination thousands of times the true suburban residential RBSL could mean that migration, even with possible reduction of concentrations,⁷⁴ could result in unacceptable exposures to the people nearby.

DOE's Alternative 2, which could leave in excess of 90% of the contamination in place, obviously violates the AOC. But even in the absence of an AOC, it also violates DTSC's procedures for risk-based cleanups, which are to rely on local government's land use designations.

Additionally, Alternative 2 violates the DOE-EPA 1995 Joint Policy requiring cleanup of all DOE sites, whether they are on the National Priority List or not, to EPA's CERCLA guidance. The relevant guidance similarly relies on local government land use designations.⁷⁵ Interestingly, the stated intentions of the Responsible Parties (i.e. the polluters) for how they would want to restrict the land to avoid more protective cleanup obligations is not one of the factors identified in EPA guidance to be considered.

⁷³ Furthermore, institutional controls cannot be relied upon when institutions can be counted on to exist for only a fraction of the time over which the toxic materials are dangerous. See, e.g., Hirsch, *50 Years of Power, 500,000 Years of Waste*, December 20, 2013, in U.S. Nuclear Regulatory Commission docket for Waste Confidence Rule and Generic EIS, NRC-2012-0246.

⁷⁴ For example, a ten-fold dilution factor would still result in hundreds of times the risk based level for residences. And there is nothing to guarantee that contaminants wouldn't concentrate offsite; e.g., where they tend to accumulate in sediments.

⁷⁵ "Land Use in the CERCLA Remedy Selection Process," EPA OSWER Directive 9355.7-04.

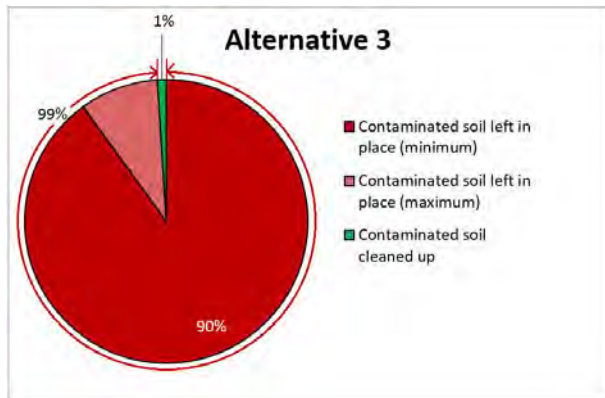
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72-24 The Cleanup to Revised LUT Values Alternative referred to in this comment does not violate any DTSC or EPA policy. It, in fact, goes beyond what either agency would do for cleanup of CERCLA or State-lead sites. This alternative would clean up radioactive constituents to LUT values established in accordance with the 2010 AOC (DTSC 2010) (i.e., same as the Cleanup to AOC LUT Values Alternative); however, DOE would apply risk-based screening levels (RBSLs) developed consistent with the CERCLA risk-assessment principles for chemicals.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

3. Alternative 3 – 25 Millirem/yr for Radiation, and Averaging Chemical and Radioactive Contamination Over Wide Areas, Leaving in Place 90-99% of the Contaminated Soil, Not Cleaned Up



This alternative, which would leave from 90% to as much as 99% of the contamination not cleaned up, is cynically referred to by DOE as the *Conservation of Natural Resources* alternative.⁷⁶ After polluting those natural resources for sixty years,

⁷⁶ DOE estimates in the DEIS (p. S-33, S-39) that this alternative involves cleaning up 148,000 cubic yards of soil, out of the 1,413,000 cubic yards it estimates are contaminated, thus leaving about 90% not cleaned up. The DEIS, however, indicates that this option involves the As Low As Reasonably Achievable (ALARA) principle, in which DOE will decide whether to clean up 44,000 cubic yards of soil contaminated above AOC LUT limits. It is not clear from the DEIS whether the 148,000 cubic yard estimate presumes cleanup of all, or none of the 44,000 cubic yards (i.e., whether the baseline is 104,000 cubic yards with up to 44,000 cubic yards of additional soil perhaps cleaned up pursuant to ALARA). Further complicating the matter is that DOE has included the same 44,000 cubic yard figure in two different places in the table in question, on p. S-39, making it uncertain which group of contaminated soil it is identifying for prospective ALARA analysis. In practice, ALARA rarely results in additional cleanup. If the correct estimate is 148,000 cubic yards, that represents an alternative in which 90% is not cleaned up. (Because of the unclear language in the DEIS regarding the ALARA matter, we have assumed the minimum cleaned up is the figure the DEIS reports of 148,000 cubic yards). If the 5% “unforeseen circumstances” exceptions DOE claims for Alternative 1 is also claimed for Alternative 3, that would

72-25 The commenters misrepresent the outcome of the Conservation of Natural Resources Alternative. This alternative would involve the identical type of cleanup that EPA follows for CERCLA sites and DTSC for State-lead sites. The Conservation of Natural Resource Alternative would remove all soil that presents a risk to human health and the environment.

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The commenter has misinterpreted the use of ALARA in determining the volumes of soil to be removed under the Conservation of Natural Resources Alternative. The volumes of soil identified in the EIS Summary are the volumes estimated for removal under each alternative, and in the case of the Conservation of Natural Resources Alternative represent the volume of soil that would be removed with radionuclides and/or chemicals above risk-based concentration levels and determined through a CERCLA-like risk assessment process. ALARA was not used in determining the soil volumes. As to the commenter’s statement “complicating the matter is that DOE has included the same 44,000 cubic yard figure in two different places in the table in question, on p. S-39,” none of the soil categories includes soil volume estimates included in the other soil categories. The same number appearing in different categories does not represent the same soil.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

DOE purports to “protect” them by not remediating the toxic and radioactive damage it has done.

This alternative would violate the AOC, DTSC requirements, and the 1995 EPA-DOE Joint Policy. It involves cleaning up the radioactivity to a supposed dose of 25 millirem per year. That is the equivalent of a dozen unnecessary chest X-rays per year, or one a month from the moment of conception to the moment of death. EPA has long declared that dose to be “non-protective” and bars its use under its CERCLA guidance.⁷⁷

But this proposed DOE standard is even worse than it sounds at first. Because DOE in the DEIS calculates the dose based on suburban residential *without* a garden, and since the garden produces hundreds to thousands of times higher risk than the suburban residential without a garden, the true dose for the standard required suburban residential exposure scenario would be thousands of chest X-rays annually.

EPA has a Dose Compliance Calculator by which one can calculate the dose received by a member of the public in a suburban residential exposure scenario. DOE has proposed for this alternative allowing, for example, an astronomical 1200 pico-curies of strontium-90 per gram of soil (1200 pCi/g). EPA’s actual risk-based Preliminary Remediation Goal for Sr-90 is 0.0036 pCi/g, 330,000 times lower (more protective). According to the EPA Dose Compliance Calculator, the cleanup level of strontium-90 DOE is proposing for a suburban resident would produce a dose, not of 25 millirem/year, but an astounding 1540 millirem per year. That is the equivalent of 770 chest X-rays a year, about two a day from conception on, for decades. We urge that DOE not suggest this is a reasonable exposure for the public.

The situation is even worse for other radionuclides. The plutonium-239 cleanup level DOE proposes for this alternative, 640 pico-curies per gram, is 104,065 times higher than EPA’s PRG for Pu-239, which is 0.00615. EPA’s Dose Compliance Calculator estimates a dose of 4,220 millirem/year from the DOE proposed cleanup level, the equivalent of 2,110 chest X-rays per year, nearly six a day, for decades.

leave 95% not cleaned up. And if the 44,000 cubic yard figure for ALARA is the one from the furthest right column in the table on S-39, then as much as 98 or 99% of the contamination would be left in place, taking into account uncertainties of measurements and estimates. Even if Alternative 3 resulted in “only” 90% not cleaned up, that would still be an extraordinary breach of the AOC and of the necessity to protect the public health and ecological features.

⁷⁷ EPA, “Radiation Risk Assessment at CERCLA Sites: Q&A,” OSWER 9285.6-20, June 13, 2014; see p. 28. Dose is not to be used at CERCLA sites as a cleanup standard unless there is an Applicable or Relevant and Appropriate Requirement (ARAR) that is at a substantially lower dose; if there is no such ARAR (and only Maine has one), one is to not use dose and to use CERCLA’s process of aiming for a one in a million risk, which is roughly equivalent to a few hundredths of a millirem per year.

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72-26 As indicated in Chapter 2, Sections 2.3 and 2.4, of this Final EIS, technical issues with implementing the 2010 AOC was one of the reasons DOE evaluated other alternatives, including the Conservation of Natural Resources Alternative referred to in this comment. DOE believes that the approach taken in developing this alternative is consistent with the approach taken by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites and is consistent with the approach taken by EPA at CERCLA sites. That is, it considers future land use and risk to human and environmental receptors. DOE notes that the Conservation of Natural Resources Alternative (both scenarios) analysis in this Final EIS results in radiological risks in the 10⁻⁵ range; this would correspond to a dose much lower than 25 millirem per year.

The dose limit can be compared to the average annual radiation dose from natural background radiation received an individual in the United States of 310 millirem per year. Please refer to Section 2.6, “Comparison of Radiation Doses,” of this CRD for further discussion of the 25 millirem per year dose limit.

72-27 The EPA dose calculator default residential exposure pathways include, among many other factors, a garden pathway that assumes 25 percent of the fruits and vegetables consumed by the resident are raised in a home garden, presumably the source of the commenter’s EPA PRGs. If the garden pathway factor is removed from the calculation, the EPA dose calculator produces comparable risk criteria (i.e., PRGs) as were used in the Draft EIS. As explained in Section 4.9 and in Appendix G of the Draft EIS, DOE used suburban residential risk-based screening levels (RBSLs) or slope factors based on the direct exposure pathways and without the indirect garden pathway to evaluate potential impacts to an onsite receptor.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. They permanently bind the property, regardless of who owns the land. North American Land Trust will monitor and enforce the easements. Under the restrictions of the conservation easements, the use of exposure pathways that exclude the indirect garden pathway is appropriate.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Radiation Dose from DOE SSFL Clean-up Levels

source: EPA Dose Conversion Calculator

Radionuclide	EPA estimated dose for DOE proposed cleanup level (mrem/year)	How many CHEST X-RAYS would DOE levels be per year?
Nichel -59	5,290	2,645
Strontium-90	1,540	770
Americium -241	2,180	1,090
Plutonium -239	4,220	2,110
Thorium -232	3,330	1,665

Comparing DOE's Alternative 3 proposed cleanup levels for radioactivity for a supposed suburban residential standard against EPA's preliminary remediation goals (PRGs) for suburban residential exposure shows the extraordinary increases DOE proposes. As indicated above, DOE's strontium-90 proposed cleanup level is more than 330,000 times higher than EPA's PRG for suburban residential exposure; for plutonium-239, they are proposing a cleanup level more than 100,000 times higher than the EPA PRG.

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DOE SSFL Clean-up Levels vs. EPA Preliminary Remediation Goals (PRGs)

Radionuclide	Department of Energy (DOE) Levels (pCi/g)	Environmental Protection Agency (EPA) Levels (pCi/g)	How much higher is DOE than EPA?	What's the cancer risk?
Strontium-90	1,200	0.0036	332,410	28%
Plutonium -238	700	0.00178	393,258	33%
Plutonium -239	640	0.00615	104,065	10%
Uranium -238	240	0.00176	136,364	13%

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

Using EPA's PRG calculator set to estimate cancer risk at the concentrations DOE proposes, the estimated risk for strontium-90 is 28% -- a bit more than every fourth person on average would get a cancer from the radiation exposure. That is in addition to their regular cancer risk. For plutonium-238, the additional risk is every third person getting cancer from the exposure.

EPA aims for a one in a million risk, and DOE says in the DEIS that that is what its proposed cleanup levels would produce. But that clearly is not the case. The risks associated with their proposed cleanup levels are hundreds of thousands of times higher than the promised risk level, and far outside EPA's and DTSC's acceptable risk range.

Further, (and indeed, plaintiffs find this wearying), this proposed alternative is even worse than just described. EPA guidance provides that one should not average contamination across areas for exposure scenarios such as residential where the exposure is non-random, for the obvious reason that someone can be exposed to high levels of contamination in one place even though another place is lower.⁷⁸ Yet DOE states for this alternative it will average the contamination across areas, resulting in high levels of contamination in one place not getting cleaned up.⁷⁹ So, if contamination existed in one location at the immense concentrations DOE is proposing for its cleanup standard, it still wouldn't get cleaned up, because DOE proposes averaging the contaminated soil with less contaminated soil elsewhere. This also violates the 1995 Joint Policy, as well as the AOC, which bars averaging.

DOE claims that the excess cancer risk from any of the alternatives would be trivial, one in a million (10⁻⁶).⁸⁰ The true risk would be greatly higher, because DOE is uses RBSLs that are a thousand times weaker than true suburban or rural residential RBSLs, leaves out the garden or the rural residential standard entirely, and then weakens them further by averaging elevated concentrations in one location with lower concentrations elsewhere.

To show how extraordinarily high the risks would be, note that Boeing did risk assessments for parts of Area III, which borders DOE's Area IV, and concluded that risks

⁷⁸ EPA, Radiation Risk Assessment at CERCLA Sites: Q&A, June 13, 2014, OSWER 9285.6-20.

⁷⁹ The DEIS indicates that this averaging would be over the entire NBZ, or over subareas in Area IV, which are tens of acres. See. p. 2-33, 3-108 - 3-111. The NBZ itself is 182 acres and Area IV is 290 acres. *Final Radiological Characterization of Soils Area IV and the Northern Buffer Zone Area IV, Radiological Study, Santa Susana Field Laboratory, Ventura County, California*, prepared by HGL for USEPA, December 12, 2012, p. 1-1.

⁸⁰ Elsewhere in the DEIS, DOE suggests it wouldn't clean up to its proposed RBSLs, but merely use them for making cleanup decisions, indicating it might then leave contaminants behind at up to several hundred times the RBSL. Further it indicates that when multiple contaminants are present, it would leave them not cleaned up, instead of using the "sum of the fractions" rule normally applied when there are multiple contaminants. These matters are of concern and should be clarified.

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72-28 The commenter is incorrect. Averaging of soil data is the standard means of assessing risk accepted by EPA and DTSC. Per EPA guidance (Office of Solid Waste and Emergency Response. Supplemental Guidance to EPA's Risk Assessment Guidance for Superfund: Calculating the Concentration Term. Publication 9285.7-081 [EPA 1992]), the basis for risk determination assumes a random exposure over an exposure area. The exposure area is an assumed location where exposure to the chemical in soil may occur. Risk from exposure to a chemical is then related to the arithmetic mean concentration of that chemical averaged over the entire exposure area, regardless of the current or future land use type. Because the true arithmetic mean concentration cannot be calculated with 100 percent certainty from a limited number of measurements, the EPA recommends that the upper 95th percentile confidence limit (UCL) of the arithmetic mean at each exposure point be used when calculating exposure and risk at that location. This is also consistent with DTSC Human and Ecological Risk Office guidance that states: "In cases where there is adequate characterization, the 95 percent upper confidence limit (UCL) of the arithmetic mean may be used for the exposure point concentration." Characterization of soil contaminant conditions for Area IV and the NBZ has been adequately performed. EPA's radiological characterization effort involved analysis of 3,487 soil and 55 sediment samples (HGL 2012b). DOE's chemical characterization effort entailed collection and chemical analysis of 5,854 soil samples and conducting a data gap analysis that reviewed site operations and chemical releases and assessed the adequacy of existing data to guide soil sampling. Because of this, the 95 UCL of the arithmetic mean was used in risk estimates.

72-29 The commenters are mistaken. The RBSLs used for the soil cleanup determination are those accepted by DTSC for use at the site. The risks calculated by Boeing for Area III that resulted in high rates of cancer incidence were for the garden pathway for the suburban resident. However, this issue is now moot as the Boeing Conservation Easement prevents redevelopment of its SSFL property, and growing of food on the property is prohibited.

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

for the suburban residential scenario would be as high as 96 cancers produced per 100 people exposed, essentially a million times higher than DOE is claiming just on the other side of the boundary, by using its various improper weakening factors.⁸¹ Even after cleaning up to the standard DOE is proposing for Alternatives 2 and 3, suburban residential without garden, Boeing estimates remaining risks a thousand times higher than the one-in-a-million level claimed by DOE, which is far outside EPA's risk range that DOE is supposed to be following.⁸²

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DOE attempts to characterize Alternative 3, which involves taking no steps to clean up the great majority of environmental damage it caused at SSFL, as "Conservation of Natural Resources." What is remarkable is that the DEIS nowhere actually compares its proposed cleanup standards to the actual Ecological Receptor Risk Based Screening Levels (EcoRBSLs), established by DTSC in the SRAM. When one does so, the results are stark: the cleanup levels proposed by DOE exceed the EcoRBSLs by orders of magnitude. In other words, in the guise of protecting natural resources, DOE proposes to leave behind, uncleaned up, toxic materials at levels far in excess of the levels considered a risk to biological species.

Here are a few examples (the more detailed analysis is in the attached spreadsheet).

DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL VS. ECO RBSL

Chemical	DOE Proposed Cleanup Level in EIS, Supposed Suburban Residential RBSL (mg/kg)	ECO RBSL (mg/kg)	How much more of each chemical does DOE propose to leave? (Compared to ECO RBSL)
Mercury	16.8	0.1	168 times more
Bis(2-ethylhexyl)phthalate	173	0.32	540.6 times more
Silver	230	.99	232 times more
Perchlorate	53.3	0.5	106.6 times more
Pyrene	1,650	1.2	1375 times more
Acenaphthene	3,230	1.1	2,936 times more

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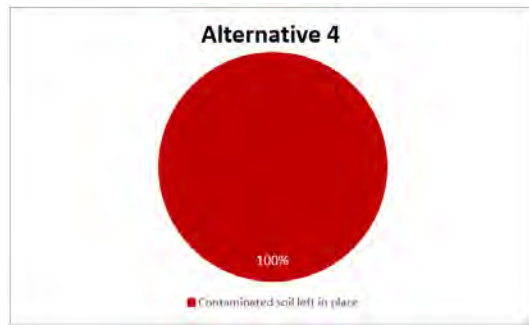
72-30 Please see response to comment 72-4.

⁸¹ See December 2015 letter by Supervisor Kuehl, Councilmember Englander, and then-Senator Pavley to DTSC Director Lee.

⁸² See Boeing risk assessments for Subarea 5/9 South, at http://www.dtsc.ca.gov/SiteCleanup/Santa_Susana_Field_Lab/ssfl_document_library.cfm

Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

4. Alternative 4 – the “No Action Alternative”



This is an alternative for analysis purposes required in NEPA. However, in this case, it is little different than Alternatives 2 and 3, which would take no action for cleanup of the great majority of the contamination.

D. Groundwater

The 2007 Consent Order requires cleanup of the chemically contaminated groundwater, with the permanent remedy in place by 2017. The 2010 AOC included radioactive contamination in groundwater to be also remediated, via the 2007 Consent Order, by the same deadline. We are now in 2017 and no permanent remedy is in place. Instead, in the DEIS, DOE now says it is considering just leaving in place the contamination and hoping for natural attenuation over time. Furthermore, the plume from SSFL has already migrated offsite. The groundwater must be cleaned up, and there is no plan put forward in the DEIS to do so.

E. Building Demolition and Disposal

The AOC covers cleanup of all soil at SSFL to local background and defines soil as including structures, debris, and anthropogenic materials.⁸³ All buildings and the debris from dismantling them are therefore covered. The cleanup to background is to a

⁸³ AOC, p.p. 4-5.

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72-31 As the commenters noted in their cover letter, the No Action Alternative, which would not remove any contamination, is a NEPA requirement for an EIS and forms the basis for comparison with action alternatives. DOE disagrees with the commenter's statement that "Alternatives 2 and 3 would take no action for cleanup of the great majority of the contamination." The Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative would remove the contamination that would be a risk to human health and the environment. What would be left under the two alternatives, are low concentrations of chemicals that do not pose a risk to human health and the environment.

72-32 DOE provided a letter to DTSC on June 30, 2017 stating that the 2017 date would not be met. The Draft EIS does not state that DOE "is considering just leaving in place the contamination and hoping for natural attenuation over time." The commenters are in error with the statement "there is no plan put forward in the EIS" to cleanup groundwater. The EIS introduces several active groundwater remedies including pump and treat, soil or bedrock vapor extraction, and removal of the strontium-90 source. The commenters are referred to Chapter 2, Section 2.6 of the EIS for details on these remedies. DOE is actively discussing with DTSC the plans to remediate impacted groundwater in Area IV and the NBZ. Finally, there are no groundwater plumes that originate in Area IV that have migrated beyond the SSFL boundary.

72-33 As discussed in Chapter 2, Section 2.5, of the EIS, DOE proposes to remove all of the remaining buildings. A cleanup standard for buildings is moot as 100 percent of the materials would be removed from Area IV.

72-32

Regarding disposal of building debris, DOE's preferred alternative is to remove all 18 of the DOE structures, including foundations and subterranean structures from Area IV. Waste from the buildings within RMHF and Buildings 4019 4024 would be managed and disposed of offsite as radioactive waste. In this EIS, waste from other buildings that have a radioactive history was also assumed to be disposed of as radioactive. While waste only from Buildings 4038, 4057, 4462, and 4463 is not assumed to be radioactive, these buildings would be surveyed for the presence of radioactive material and disposed of appropriately after demolition. Any residual radioactivity that may remain in the soil near or under the DOE buildings would be addressed as part of soil remediation activities. DOE will comply with all applicable requirements for removal and disposition of building materials.

72-33

The radionuclide and chemical content on and within buildings or structures will be determined in accordance with decisions made pursuant to this Final EIS, regulatory

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“not to exceed standard,” with averaging prohibited.⁸⁴ And all waste above background must be disposed of in a licensed low level radioactive waste (LLRW) disposal site or authorized LLRW disposal facility at a DOE site.⁸⁵

The DEIS is unclear as to whether DOE intends to comply fully with these requirements. At p. 2-46 of the DEIS, DOE asserts that “materials from buildings with a radiological history would be managed as radioactive waste for disposal purposes unless they can be suitable for free release. Free-released debris and free-released hazardous debris do not exhibit radioactivity above background levels.” However, DOE is silent on whether it would average contamination, either within a part of a building or over part of the debris, or would comply with the prohibition on averaging and the requirement for treating as contaminated any samples that exceed background. DOE is also silent as to how background for buildings will be determined. Will the values be taken from other buildings at SSFL, which could also be contaminated? Furthermore, the AOC requires EPA to set the background values.⁸⁶

Additionally, DOE states in the DEIS that it will declare as non-radioactive, and dispose of as such, all wastes from any structure that it does not know to have a “radioactive history.”⁸⁷ However, such process knowledge extending over half a century or more is quite imperfect and unreliable. Furthermore, even if buildings weren’t explicitly used for radioactive work, they were located in areas where there is radioactive contamination. Contamination clearly wasn’t limited to the interior of buildings where radioactive work was done; there were extensive releases, which is why so much soil is contaminated. There is no basis to assume that either the outsides or insides of these buildings are clean; they should be thoroughly surveyed, and only to the extent that no radioactivity above background is found, should they be allowed to be disposed of as other than LLRW.

Finally, DOE elsewhere in the DEIS (p. D-1) appears to contradict the claim at p. 2-46 that buildings will be considered “free released” only if they are free of radioactivity above background. At p. D-1, however, DOE says “For a building to be free released, it must meet the conditions of DOE Order 458.1, *Radiation Protection of the Public and Environment*, which limits doses to the public from DOE activities to either 25 millirem per year (or as low as reasonably achievable) or requires the surface contamination levels to meet the default limits expressed in DOE Order 5400.5 (same title as DOE Order

⁸⁴ “Residual concentrations “not to exceed” local background concentrations i.e., if during site survey efforts or during confirmatory sampling the levels of an constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above background will not be averaged with any other soil.” AOC Attachment B p. 3, ; see also Attachment C, “Confirmation Protocol ‘Not to Exceed’ Background Cleanup Standard.”

⁸⁵ AOC Attachment B p. 3.

⁸⁶ id., p. 2.

⁸⁷ DEIS, p. 2-46.

requirements, and approved procedures. The approved plans and procedures would describe the activities that DOE would perform to sample and characterize and determine appropriate handling methods for managing and disposing of demolition debris. This information was added to Appendix D, Section D.1, of this Final EIS. Footnote 1 in Appendix D was deleted in this Final EIS. Because it is DOE’s intention to remove 100% of building structures and to dispose of the materials in accordance with Federal, State, and local laws, and DOE orders, the language in the AOC regarding buildings is moot.

72-33
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458.1 and superseded by that Order) and U.S. Nuclear Commission [sic] Regulatory Guide 1.86, *Termination of Operating Licenses for Nuclear Reactors.*"

This statement raises a number of concerns. It would appear to contradict the commitment at p. 2-46 that only buildings and debris that exhibit no radioactivity above background will be released, as set forth in the AOC. As indicated in the discussion of Alternative 3 above, 25 millirem per year, about a dozen chest X-rays annually, has long been declared by EPA to be non-protective and not allowed by EPA guidance, which DOE has committed in the 1995 Joint Policy to follow. Similarly, under both the AOC and the Joint Policy, other agency guidance such as Reg. Guide 1.86 (which would allow release far above background and outside the EPA risk range), is also not to be employed.⁸⁸ Risks from the Reg. Guide 1.86 levels are orders of magnitude higher than the one-in-a-million risk goal and above the upper end of EPA's acceptable risk range, according to the EPA's Building PRG calculator.⁸⁹ Furthermore, Reg. Guide 1.86 is more than four decades old, was issued by the AEC (which no longer even exists), was not designed to be based on health protection but rather on what hand-held detectors in the 1960s could readily detect, and has been withdrawn by the NRC as outmoded.⁹⁰

However, the central issue is that to not clean up buildings to local background and to dispose of waste above background in other than LLRW⁹¹ sites would violate the AOC. In one part of the DEIS, DOE appears to promise to comply with those requirements, but elsewhere questions are raised about that commitment. This should be clarified, making fully clear that the AOC requirements (cleanup to background, no averaging, disposal of everything above background in an LLRW site) will be strictly followed.

Finally, the DEIS only addresses radioactively contaminated buildings in Area IV that are owned by DOE and is silent about the demolition and disposal of radioactive buildings in the area that are owned by Boeing. Efforts to dismantle those radioactive buildings and send radioactive debris from them to non-LLRW sites resulted in a preliminary injunction still in effect.⁹² The AOC covers all soil in Area IV and the NBZ.⁹³ Soil is, as indicated above, defined as including buildings and debris. DOE thus

⁸⁸ See EPA Radiation Risk Q&A, *supra*.

⁸⁹ https://epa-bprg.ornl.gov/cgi-bin/bprg_search

⁹⁰ *Release of Solid Materials at Licensed Facilities: Issues Paper, Scoping Process for Environmental Issues, and Notice of Public Meetings; Federal Register* / Vol. 64, No. 125 / Wednesday, June 30, 1999; see also 83 FR 53507, August 12, 2016, "Regulatory Guide Withdrawal."

⁹¹ We note that the DEIS, rather than using the term of art and the term used in the AOC, LLRW, refers instead to LLW. See e.g., DEIS p. 1-12. The proper term, LLRW, should be used throughout.

⁹² Sacramento Superior Court, *Order After Hearing, Granting Preliminary Injunction, Physicians for Social Responsibility et al. v. California Department of Toxic Substances Control et al., the Boeing Company real party in interest*, December 11, 2013.

⁹³ AOC p.1, 5.

72-33
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72-34

72-34

DOE's preferred alternative for buildings is complete removal of at least all 18 of the DOE-owned buildings. It is DOE's understanding that Boeing intends to do the same. Boeing has responsibility for removal of its structures at the SSFL, including in Area IV. Boeings actions are not subject to NEPA, but rather subject to the California Environmental Quality Act and are addressed in the Programmatic Environmental Impact Report (EIR) in preparation by DTSC. The AOC does not give DOE legal authority for the removal of Boeing-owned structures in Area IV.

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agreed to clean up all soil, as defined, in Area IV and NBZ, irrespective of who owned it or who contaminated it. Indeed, all of the contaminated land is owned by Boeing, but DOE is nonetheless responsible for its cleanup. Therefore there is no basis for the DEIS to exclude the cleanup to background of Area IV buildings and disposal of resulting debris above background at LLRW sites, no matter who might own the buildings.

72-34
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F. Failure to Consider Transportation Options

DOE has worked energetically to inflate soil volume estimates and thus the estimated number of truck trips to try to scare people near the site into supporting DOE's efforts to get out of having to clean up the contamination it created.⁹⁴ The fact that for decades vast numbers of trucks hauled immensely more dangerous material to and from the site while it operated (e.g., high level radioactive waste/highly irradiated nuclear fuel/plutonium) is ignored.

DOE arbitrarily declined to consider transportation options such as the nearby rail line, the use of conveyor systems, or the use and potential upgrade of alternative vehicular routes that would pass few houses. It did so claiming to consider such options would delay the project, because it would require study and otherwise take time.⁹⁵ But DOE has had at least fifteen years, since it first did its Environmental Assessment, to address ways of avoiding truck impacts on neighborhoods if it wished to, and its refusal over all those years to take any step to consider alternatives is not defensible.

72-35

The soil volumes used in the EIS have been independently verified and used by DTSC in its Draft Program EIR. Please see the response to comment 72-6. DOE acknowledges that there were occasional shipments of radioactive material to and from Area IV during the period of nuclear research; these past shipments, however, are irrelevant to the scope of this Final EIS which is to evaluate alternatives for remediation of Area IV and the NBZ. DTSC in its program EIR concluded that the only viable transportation alternative is hauling wastes by truck using Woolsey Canyon Road.

There are numerous routes off the site that would involve passing few if any homes.⁹⁶ None is considered in the DEIS. There are other methods of conveyance besides trucks, e.g., a conveyor system to a nearby rail line; DOE has refused to consider it.⁹⁷ There are rail lines within a mile or so of the site that could be reached without passing a single home⁹⁸; DOE refuses to consider it, and instead, its only rail option is to truck the material 60 miles to Puente Hills to a rail depot that isn't even open yet.⁹⁹

⁹⁴ See the analysis by the Southern California Federation of Scientists (SCFS) of how the volumes estimates were inflated, submitted by SCFS March 21, 2014, during the scoping proceeding. With the exception of the soil fluffing matter, all of the concerns SCFS raised continue to be a problem with the soil volume (and thus truck trip) estimates.

⁹⁵ DEIS pp. 2-11,12.

⁹⁶ See, e.g., SSFL Transportation Options Taskforce, Preliminary Overview of Alternative Transportation Options for Santa Susana Field Laboratory Cleanup, August 7, 2014.

⁹⁷ id.

⁹⁸ id.

⁹⁹ DEIS p. H-10.

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railroad near SSFL



covered conveyor system

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conveyor

G. DOE Attack on the AOC It Executed

DOE raises several spurious issues in its attack on the agreement it signed. The first is that it is supposedly difficult to find clean fill that meets the LUT levels. But the data in the DEIS shows the Gillibrand fill meets all the requirements except with a minor exception for two constituents, which DOE itself says pose no risk, and where the measurements are identified as “J,” meaning there is no confidence in the concentration estimated. But in any case, as DOE concedes, the AOC says if there is any difficulty getting replacement soil that meets the LUT, DTSC and DOE will discuss it and DTSC will decide on the best fill available (which would appear readily to be the Gillibrand soil.) So that is a non-issue that doesn’t call into question the AOC, but in fact shows it has reasonable provisions that work.

Secondly, DOE disagrees with the LUT value for Total Petroleum Hydrocarbons (TPHs), saying it is hard to reliably detect TPHs at the LUT levels. But that is a decision for DTSC, which the AOC grants to DTSC, and DTSC has determined that labs can readily detect TPHs at the LUT value. If DOE can demonstrate that not to be the case, then DTSC can decide to change the LUT. DOE also asserts that some of the TPH detections may have been related to organic material not associated with SSFL pollution. But the report they cite actually indicates the organic contribution is just a few percent of the total measurement.¹⁰⁰ Again, that is a matter for their regulator, DTSC, not DOE. In any case, the TPH issue does not call into question the AOC. DOE estimates that of the 1.4 million cubic yards of contaminated soil, a total of 150,000 cubic yards has only TPHs, only PAHs, or TPHs and PAHs. Thus the soil contaminated with just TPH can’t explain 90% or more of the soil contamination at SSFL, which has other contaminants in it and must be cleaned up, irrespective of any question about TPHs.

¹⁰⁰ Nelson, DEIS reference 300; the naturally occurring material is estimated at only 5-8% of the total reading.

72-36

72-36

The comment is inaccurate. DOE identified and raised technical issues with the AOC with DTSC prior to release of the EIS and in the assessment of the AOC in the EIS. The assessment was performed in accordance with normal NEPA practice. In its comments on the Draft EIS, DTSC (Commenter 64) acknowledged several of the AOC implementation issues, particularly in relation to backfill. The Cleanup to AOC LUT Values Alternative would require up to an estimated 661,000 cubic yards of backfill soil that meets all LUT values. The analysis of the three backfill borrow sites (which includes the Gillibrand site) was presented to demonstrate how difficult this could be. DOE does not have the authority to accept backfill which does not meet the AOC LUT requirements, regardless of how small the exceedance of the LUT value. As the commenter noted, DOE would consult with DTSC and the DTSC is responsible for determining a suitable backfill source if one meeting the AOC LUT values cannot be found. DTSC is aware of the issue and DOE is awaiting their response. Please refer to Section 2.3, “Suitable Backfill Soil,” of this CRD for a discussion of the responsibilities and actions necessary to identify a suitable backfill source.

72-37

72-37

Please see the response to comment 072-17. DOE is aware that the TPH issue is one for DTSC to resolve.

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Lastly, DOE asserts it may be difficult to demonstrate compliance with the LUT values because of the potential for some false readings as above background when they aren't. But DTSC, at EPA recommendation, set LUT values based on background that were very inflated, using a rare statistical test called Upper Simultaneous Limit (USL) that produces an extremely high confidence that a reading is indeed above background. It errs, unfortunately in many people's eyes, by guaranteeing soil that isn't above background isn't cleaned up, instead of erring by guaranteeing that soil that is contaminated is cleaned up. This issue was raised during the EPA radiation survey. EPA dismissed it as a non-issue and indeed it turned out to be when the data came in. Although measurements were made for scores of radionuclides, EPA found contamination for the radionuclides as expected, and didn't find false positives to be a problem. Again, this is a matter not in DOE's jurisdiction; it agreed in the AOC that DTSC would set the LUT values. And it is not timely, since the LUT values were established by DTSC years ago and DOE had every opportunity to comment then, and didn't.

72-38

In short, DOE in 2010 proposed and committed to the cleanup to background; nothing has changed technically. All that has changed is that the top leadership of the agency has changed, and the DEIS shows DOE is now trying to avoid complying with the legally binding AOC.

72-39

H. Flawed Risk Assessment and Cost-Benefit Analysis

Because DOE used Risk Based Screening Levels that are thousands of times higher (less protective) than the true RBSLs approved by DTSC in the SRAM and by EPA in its PRG calculator, all risk estimates and the entire cost-benefit analysis are completely erroneous. By improperly averaging, leaving out nearly 90% of the toxic chemicals found at the site, failing to even analyze for the ecological RBSLs, and using the wrong human health RBSLs, all of the conclusions are without basis. Accurately performed risk estimates and cost-benefit analyses would show that the promised AOC cleanup is essential. But in any case, the risk assessment and cost-benefit analyses are irrelevant, because DOE is bound by the AOC requirement to clean up to background.

72-40

Conclusion

DOE has a clear obligation, having contaminated SSFL through its failure to follow proper environmental procedures, to clean the site up fully, as required by the AOCs; to do so by the deadlines agreed to; and to mitigate impacts such as trucks hauling away contaminated material by a careful development of alternative transportation options in an EIS. Instead, DOE has dragged its feet for years since the AOCs were issued, not only missing the deadline for completion of the cleanup, but not even beginning it. And now in a severely flawed DEIS, the federal agency flouts the authority of the California state agency charged with overseeing this important cleanup by proposing to breach the cleanup agreement it signed and instead leave the great majority of the contamination in place.

72-39
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72-38 EPA's recommendations for establishing the radionuclide soil look-up table values are contrary to the commenters' assertions. The LUT values were adjusted based on EPA's recommended uncertainty process. As described in Chapter 2, Section 2.3.3.1 of the EIS, EPA provided guidance and recommendations on how the AOC LUT values for radionuclides should be developed (HGL 2012c). EPA states that, "BTVs [Background Threshold Values] alone are neither appropriate nor recommended for use as the LUT values." EPA also stated that their field action levels (FALs), which they renamed "radiological trigger levels" (RTLs) after adding uncertainty factors to the FALs, should not be used for radionuclide LUT values. EPA stated that the RTLs were developed for EPA's radiological investigation of Area IV and, "EPA does not [EPA emphasis] recommend the use of those [RTLs] for future phases of the project," (i.e., cleanup). EPA recommends consideration of uncertainty in the decision-making process. EPA states, "For any given sample, a laboratory result that is equal to the BTV represents a range of possible true values for that sample; some of which are less than the BTV and some of which are greater than the BTV. Whether that result represents a true sample value that actually exceeds the BTV is purely a matter of chance; a decision that the BTV has been exceeded would be incorrect 50 percent of the time," (meaning a 50 percent false positive rate or that one-half the time, DOE could be remediating clean soil). EPA further states, "[e]stablishing a decision criterion, without considering the impact [of uncertainty], would result in a potential situation in which the release of uncontaminated background-level material would not be assured, but would instead be randomly determined, similar to a coin toss." EPA goes on to caution DTSC's selection of AOC LUT values: "While DTSC may select LUT values that are equal to cleanup levels, it is EPA's understanding that the extraordinarily high decision error rate for laboratory results at or near those cleanup levels [that is, background] is believed to be unacceptable." EPA states that it "recommends an adjustment to the BTVs and minimum detectable concentrations to include appropriate consideration [for uncertainty] to ensure an acceptably low decision error rate of approximately 5 percent" (HGL 2012c). The FALs used by EPA in presenting potential radionuclide contamination did not include an uncertainty factor and, thus per EPA, should not be used to determine the presence of radionuclide contamination. The FALs themselves did not become the provisional LUT values. The provisional LUT values issued by DTSC included an adjustment for uncertainty per the EPA guidelines. DTSC issued the LUT values without an opportunity for a formal comment period. During meetings with DTSC, DOE did express its concerns regarding the nature of the LUT values which are below what most laboratories can achieve.

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The public that resides in the area surrounding the site will be placed at continued and perpetual risk if DOE continues on this course. We call this day for extensive revision of the DEIS so that it is fully in compliance with the AOC and DOE's commitments for a complete cleanup of the contamination for which it is responsible.¹⁰¹

72-41

for contact: LANRDCCBGcomments@gmail.com

¹⁰¹ In so doing, we call attention to the resolutions passed by the Los Angeles County Board of Supervisors, the Ventura County Board of Supervisors, and the Los Angeles City Council all similarly calling on DOE to alter the DEIS so that it is fully in compliance with the AOC requirements. Copies are enclosed.

We acknowledge the technical contributions to this analysis provided by the Program on Environmental and Nuclear Policy at the University of California, Santa Cruz.

The issue of decision rate error for radionuclides also applies to chemicals. The 2010 AOC (DTSC 2010) (paragraph 1.8.3.1) specifies that the detection limits for the chemical AOC LUT values should be based on the "lowest concentrations at which an analyte can be confidently detected in a sample and its concentration can be reported with a reasonable degree of accuracy and precision." During the development of the chemical AOC LUT values, DTSC chemists were critical of the process. In a memorandum to DTSC management, the chemists stated, "[t]he Environmental Chemistry Laboratory does not recommend the process outlined in the current Draft Technical Memorandum to serve as the foundation for site characterizations and for the development of the [method reporting limit] lookup table values" (DTSC 2012a).

72-39 Refer to the responses to comments 72-2 and 72-6.

72-40 Please refer to the responses to comment 72-22. The commenters have improperly compared RBSLs with the associated land uses. The SRAM provided separate RBSLs for both the direct pathways and the indirect garden pathway. The use by DOE of only the direct pathways is consistent with the land use as open space. The commenters are also incorrect regarding how exposure point concentrations are calculated. When a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989, 1992) does allow for averaging and prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and only suggests the use of a maximum value as a screening tool. It is important to note that under any of the soil remediation alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment, would be removed. Soils that would be left on site would have lower concentrations of chemical and/or radioactive constituents (in all alternatives concentrations below levels derived from risk-based criteria). Each of the three action alternatives analyzed in this EIS would leave SSFL Area IV and the NBZ safe for their designated future land.

In response to comments, this Final EIS more explicitly addresses ecological risk receptors, such as risks to plants and animals (see Chapter 4, Section 4.5, of this Final EIS).

72-41 As described in Chapter 1, Section 1.11, of this Final EIS, DOE has made a number of revisions in response to new information and comments on the Draft EIS. The analysis in this Final EIS shows that the public residing near SSFL would not be at risk from the chemical and radioactive constituents from the remediation of Area IV and the NBZ. Following cleanup in accordance with any of the soil remediation action alternatives, any risk posed to the adjacent public would be reduced (see Chapter 2, Section 2.8 of this Final EIS).

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City of Los Angeles, Natural Resources Defense Council, Committee to Bridge the Gap
Comments on Department of Energy Draft Environmental Impact Statement for Remediation of
Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

EXHIBITS

NOTE: With the exception of the first items (the resolutions by the Los Angeles City Council, the Los Angeles County Board of Supervisors, the Ventura County Board of Supervisors and the charts of cleanup level comparisons), the references are in the order in which they are cited in the Detailed Comments. By clicking on the link for the reference, one should be taken to the document. We suggest downloading the relevant document(s) and viewing in Adobe Acrobat or Reader. If one has any difficulty, please contact LANRDCCBGcomments@gmail.com

Exhibit #	Description
1a	Los Angeles City Council SSFL DEIS Resolution
1b	Los Angeles County Board of Supervisors SSFL DEIS Resolution
1c	Ventura County Board of Supervisors SSFL DEIS Resolution
2	Spreadsheet of Cleanup Level Comparison
3	U.S. Atomic Energy Commission, <i>General Reactor Site Survey of the Los Angeles Area</i> , NAA-SR-30, June 1, 1949
4	<i>Report of the Santa Susana Field Laboratory Advisory Panel</i> , October 2006
5	Cochran, Thomas Ph.D., NRDC, <i>Sodium Reactor Experiment Fuel Meltdown</i> , August 29, 2009
6	Committee to Bridge the Gap, <i>Past Accidents and Areas of Possible Present Concern Regarding Atomic International</i> , January 18, 1980
7	T. J. Thompson and J. G. Beckerley, <i>The Technology of Nuclear Reactor Safety</i> , prepared under the auspices of the US Atomic Energy Commission, 1964[1]
8	Declaration of Arjun Makhijani, Ph.D., President of the Institute for Energy and

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Environmental Research, in Lawrence O'Connor et al. v. Boeing North American, et al., U.S. District Court for the Central District of California, February 12, 2004, (the redactions are in the version made public in the court proceeding)

- 9 Paredes, Frances, *Fines for Violations of Pollution Laws at SSFL, Discharges of Contaminants Into Offsite Areas*, Presentation to SSFL Work Group, June 18, 2014
- 10 Morgenstern, Froines, Ritz and Young, *Epidemiologic Study to Determine Possible Adverse Effects to Rocketdyne/Atomics International Workers from Exposure to Ionizing Radiation*, Final Report to the Public Health Institute, June 1997
- 11 SSFL Epidemiological Oversight Panel, *Santa Susana Field Laboratory Epidemiological Study: Report Of The Oversight Panel*, September 1997
- 12 Cohen, Yoram et al., *Potential for Offsite Exposures Associated with the Santa Susana Field Laboratory*, February 2006, report funded by the Agency for Toxic Substances and Disease Registry
- 13 Morgenstern, Hal et al., *Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California*, March 2007, report funded by the Agency for Toxic Substances and Disease Registry
- 14 Morgenstern, Hal, Letter to Senator Joe Simitian, Chair, California Senate Committee on Environmental Quality, April 5, 2007
- 15 National Governors Association, *Cleaning Up America's Nuclear Weapons Complex: 2015 Update for Governors*
- 16 DOE, *Environmental Survey, Preliminary Report, DOE Activities at Santa Susana Field Laboratory*, February 1989, DOE/eh/OEV-33-P
- 17 DOE, *Tiger Team Assessment of ETEC*, April 1991
- 18 DOE & EPA, *Policy on Decommissioning Department of Energy Facilities Under CERCLA*, May 22, 1995
- 19 Boeing Company, *Approved Site-wide Release Criteria for Remediation of Radiological Facilities at the SSFL*, December 12, 1998
- 20 DOE, *Environmental Assessment for Cleanup and Closure of the Energy Technology and Engineering Center*, DOE/EA-1345, March 2003
- 21 DOE, *Finding of No Significant Impact, Cleanup and Closure of the Energy Technology and Engineering Center*, March 31, 2003

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- 22 Conti, U.S. District Judge Samuel, *Order Granting Plaintiffs' Motion for Summary Judgment*, May 2, 2007
- 23 2010 Consent Order Between DTSC, DOE, and NASA
- 24 DTSC, *Response to Comments, Agreements in Principle, State of California and the Department of Energy, of California and the National Aeronautics and Space Administration*, October 26, 2010, Volume I
- 25 DOE and DTSC, *Administrative Order on Consent*, December 2010
- 26 Debbie Raphael, DTSC Director, to Allen Elliott, NASA SSFL Project Director, September 19, 2011
- 27 DTSC Director Raphael to NASA Administrator Bolden, May 22, 2012
- 28 Senator Barbara Boxer to NASA Administrator Bolden, March 29, 2012
- 29 Senator Barbara Boxer to NASA Administrator Bolden, March 30, 2012
- 30 DTSC SSFL Project Update March 30, 2012
- 31 Allen Elliott, NASA, to DTSC Debbie Raphael of August 9, 2011
- 32 CEQ Chair Nancy Sutley to Senator Barbara Boxer, June 19, 2012
- 33 Allen Elliot, Program Director, SSFL, NASA, Update on NASA's National Environmental Policy Act Compliance for Santa Susana Field Laboratory, July 19, 2012
- 34 James Wright, NASA Associate Administrator, to DTSC Director Raphael, July 10, 2012
- 35 DOE, *Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement*, May 2012 [yellow highlighting added]
- 36 CDM Smith 2015b [DEIS reference]
- 37 Nelson 2014 [DEIS reference]
- 38 Nelson 2015a [DEIS reference]
- 39 Nelson 2015b [DEIS reference]

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- 40 Nelson 2015c [DEIS reference]
- 41 Nelson 2015d [DEIS reference]
- 42 U.S. Fish and Wildlife Service, *Biological Opinion for the Santa Susana Field Laboratory Area IV Radiological Study Project, Ventura County, California* [EPA Contract # EP-S7-05-05] (8-8-10-F-12), May 25, 2010
- 43 Letter from DOE's John Jones to CDFW's Mary Meyer, September 12, 2016
- 44 Attachment A to Jones letter, "Supporting Analysis, Effects of Soil Remediation on Santa Susana Tarplant (*Deinandra minthornii*) in SSFL Area IV, August 2016
- 45 DTSC Director Barbara Lee to DOE Assistant Secretary Regalbuto, *Initial DOE Assessments Related to the Santa Susana Field Lab Cleanup*, January 6, 2017
- 46 W&S Consultants, *Class III Inventory/Phase I Archaeological Survey of the Santa Susana Field Laboratory, Area 4, Ventura County, California*, September 24, 2001
- 47 EPA, *Land Use in the CERCLA Remedy Selection Process*, EPA OSWER Directive 9355.7-04
- 48 Prillhart, Kimberly, Director, Ventura County Planning Division, to Mark Malinowski, DTSC July 20, 2015
- 49 *Final Standardized Risk Assessment Methodology*, Rev. 2 Addendum, August 2014
- 50 Paulson, Roger of DTSC to Michael Bower of Boeing, letter of August 23, 2016
- 51 Supervisor Sheila Kuehl, Councilmember Mitchell Englander, and Senator Fran Pavley to DTSC Director Barbara Lee, December 15, 2015
- 52 Hirsch, Daniel, Hirsch, *50 Years of Power, 500,000 Years of Waste*, December 20, 2013, in U.S. Nuclear Regulatory Commission docket for Waste Confidence Rule and Generic EIS, NRC-2012-0246
- 53 EPA, *Radiation Risk Assessment at CERCLA Sites: Q&A*, OSWER 9285.6-20, June 13, 2014
- 54 HGL (for EPA), *Final Radiological Characterization of Soils Area IV and*

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Commenter No. 72 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Geoffrey H. Fettus, Senior Attorney, Natural Resources Defense Council; Catherine Lincoln, Executive Coordinator, Committee to Bridge the Gap

the Northern Buffer Zone Area IV, Radiological Study, Santa Susana Field Laboratory, Ventura County, California, December 12, 2012

- 55 CH2MHILL, for Boeing, *RCRA Facility Investigation Data Summary and Findings Report, Environmental Effects Laboratory, RFI Site, Boeing RFI Subarea 5/9 South*, June 2015
- 56 CH2MHILL, for Boeing, *RCRA Facility Investigation, Data Summary and Findings Report, Systems Test Laboratory IV, RFI Site, Boeing RFI Subarea 5/9 South*
- 57 *Release of Solid Materials at Licensed Facilities: Issues Paper, Scoping Process for Environmental Issues, and Notice of Public Meetings*; Federal Register / Vol. 64, No. 125 / Wednesday, June 30, 1999
- 58 U.S. Nuclear Regulatory Commission, *Withdrawal of Regulatory Guide*, 81 FR 53507, August 12, 2016
- 59 Sacramento Superior Court, *Order After Hearing, Granting Preliminary Injunction*, Physicians for Social Responsibility et al. v. California Department of Toxic Substances Control et al., the Boeing Company real party in interest, December 11, 2013
- 60 Southern California Federation of Scientists analysis of DOE inflation of soil volume estimates, March 21, 2014
- 61 SSFL Transportation Options Taskforce, *Preliminary Overview of Alternative Transportation Options for Santa Susana Field Laboratory Cleanup*, August 7, 2014

[1] available at http://www.etec.energy.gov/Library/Main/Doc_No_51_Thompson_Accidents_and_Destructive_Tests.pdf

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Commenter No. 73: Susan Gaitz

RE: Comment on SSFL Draft Environmental Impact Statement

*The mud this site should,
Honor the agreement
Protect residents, future generations
Action is needed*

73-1

73-1

DOE acknowledges your preference for a cleanup of the site. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Signed: *Susan P. Gaitz*

Commenter No. 74: Pat Van Buskirk

RE: Comment on SSFL Draft Environmental Impact Statement

- 1. INSIST ON ADHERING TO THE 2010 CONTRACT
- 2. MUST BE ENFORCED !! (BO DTSC)
- 3. DO THE RESEARCH RE PEDIATRIC CANCERS
- 4. THE REPORTS BY DOE IS APPROPRIATE -
NUMBERS HAVE BEEN MANIPULATED
RE-DO IT! THE ECO FIGURES ARE ACCURATE.
- 5. MUST BE CLEANED UP IMMEDIATELY

Signed: Pat Van Buskirk

74-1

74-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of the site, as well as necessary steps prior to continuing cleanup, and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.

74-2

74-2 The focus of DOE's current actions and the purpose of this EIS are to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD, which discusses past studies of health effects in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

74-3

74-3 All DOE numbers have been checked for accuracy. In addition, please see Section 1.4, "Changes from the Draft SSFL Area IV EIS" of this CRD. This Final EIS includes a sensitivity analysis of the Cleanup to Administrative Order on Consent (AOC) Look-Up Table (LUT) Values Alternative that evaluates potential impacts if all areas exceeding the AOC LUT values were excavated and removed from the site (see Appendix L). Under this scenario, ecological and cultural resources would not be protected as required by applicable regulations and the AOC. Final EIS Appendix L also includes sensitivity analyses that evaluate potential impacts from constraints (e.g., budget constraints, longer-than-expected confirmation processes) that might result in soil remediation proceeding more slowly than evaluated in the proposed alternatives and scenarios

74-1 cont'd

Commenter No. 75: Signature Illegible

RE: Comment on SSFL Draft Environmental Impact Statement

I want it cleaned up!

|| 75-1

75-1

DOE acknowledges your preference for site cleanup. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Signed: 

Commenter No. 76: Signature Illegible

RE: Comment on SSFL Draft Environmental Impact Statement

AOC -
 AOC (the area) that has
 not been done for 7 years

Signed: [Illegible Signature]

76-1

76-1

DOE acknowledges your preference for cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 77: Stephen Lotaro

RE: Comment on SSFL Draft Environmental Impact Statement

If would have been good to hear the numbers of workers who got sick/died from the contamination at the Lab. Has there been any clean-up? Why wasn't clean-up started? Why isn't it finished? You must get this done! Clean I+ up!

Signed: 

77-1

77-1

The focus of DOE's current actions and the purpose of this Final EIS are to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. The reader is referred to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD, which discusses studies of health effects on workers. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

77-2

77-2

DOE acknowledges your concern regarding removal of contamination in a time-sensitive manner and refers you to Section 2.1, "Preferences for Cleanup," of this CRD, which identifies necessary steps prior to continuing cleanup DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 78: R. Hopkins

RE: Comment on SSFL Draft Environmental Impact Statement



To whom it may concern.

I expect that you will honor what you / your agency have has agreed to do. I am hopeful that you will honor the Administrative Order of Consent with no further delay or penalty.

I am hopeful legal action will not be needed for your agency to comply with the order. I am hopeful compliance will not have to be enforced by Department of Toxic Substance Control! I pay federal taxes that fund your agency do what is right!

Signed:

R. Hopkins

78-1

78-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 79: Susan Hall

RE: Comment on SSFL Draft Environmental Impact Statement

Force D.O.E. to cleanup Santa Susana
Field Lab to the standar agreeded upon
in 2010.

Signed:

Susan Hall

79-1

79-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 80: Marie Mason

RE: Comment on SSFL Draft Environmental Impact Statement

Although over the years we were told you had to
test ~~act~~ alternatives as required by law your agency
signed the AOC's. Now we can see what your
alternatives are & how much you will move
behind. No alternatives are protective of human health
except to cleanup to the levels in the AOC's. This
is at the top of a mountain & there is no
way to keep them below safe except to follow
the AOC's. So what you know is the way that
to do a keep the commitment you made to the
community in 2010

Signed: Marie Mason

80-1

80-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 81: Jacob Van Buskirk

RE: Comment on SSFL Draft Environmental Impact Statement

1. INSIST ON ADHERING TO THE 2010 CONTRACT
2. CONTRACT MUST BE ENFORCED BY DTSC
3. RESEARCH PEDIATRIC CANCERS IN AREA
& OTHER ADULT CANCERS
4. REPORTS BY DOE IS FALLOCIOS &
MISREPRESENTS FACTS BY ENV.O.
5. CLEAR IT UP IMMEDIATELY

Signed: 

81-1

81-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

81-2

81-2 Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD that discusses past studies of health effects in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this Final EIS.

81-3

81-3 Your comment has been entered into the Administrative Record for the EIS. DOE's believes that this EIS accurately presents facts and presents a technical valid analysis of potential environmental impacts.

81-1
cont'd

Commenter No. 82: Edde Dallat

RE: Comment on SSFL Draft Environmental Impact Statement

Please make the DOE clean up
the hill 100%.

Signed: 

82-1

82-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Note that there are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and that there are environmental consequences resulting from that work. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 83: Dawn Gray

RE: Comment on SSFL Draft Environmental Impact Statement

- None of the proposed alternatives draw up SSFL to the standards that DOE is committed to in the Agreement on Consent (AOC)
- DOE must not violate the agreement by looking at alternatives to following it (other than the baseline - nothing alternative)
- The agreement is a debt that the United States owes to the people of California, and the United States cannot give on its debt.
- DOE should consider various alternatives (p.e. HOW) to follow the AOC, including alternatives to using trucks, using alternative routes & reducing the most contaminated soil to reduce the amount of soil that must be removed.
- BEJEN - looked at Radisson 200 additional cancer deaths
- Morgan Stanley shows higher number with families of 2-5 miles because there ~~is~~ isn't anything there
- conveyor or other method could be used instead of trucks - they can be enclosed to

S. M. TRAN 5/14/20

Signed: Dawn Gray

83-1

83-2

83-3

83-4

83-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup" of this CRD.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

83-2 DOE has considered alternative methods of how to implement the 2010 AOC. As described in Chapter 2 and shown in Figure 2-1, soil over a large part of Area IV contains chemicals and/or radionuclides that exceed 2010 AOC LUT values. The only feasible way of cleaning up those soils to comply with the 2010 AOC LUT values is to remove it using earth-moving equipment. Other alternatives or methods of removing or cleaning the soil that DOE considered but dismissed from detailed evaluation are discussed in Chapter 2, Section 2.2.3 of this Final EIS. These include such alternatives as soil partitioning and soil washing or using large volumes of water to flush contaminated sediments to the bottoms of drainage channels where they would be recovered. As discussed in Section 2.2.3, these alternatives were determined to be ineffective or impractical.

As noted in Section 2.3 of this Final EIS, DOE identified technical issues with implementing the 2010 AOC with the current LUT values. To address this, DOE developed the Cleanup to Revised LUT Values Alternative that uses chemical risk-based screening levels as cleanup criteria. Development and adoption of revised cleanup levels as suggested by this alternative is a means by which the 2010 AOC could be made to be more implementable.

DOE considered four different routes for the trucks in technical analysis. (Please see Chapter 4, Section 4.8.2, of this Final EIS.) DOE also considered alternative means of removing waste from SSFL. See Section 2.9, "Options for Transportation of Waste from SSFL" of this CRD regarding the use of other methods and routes for

Commenter No. 83 (cont'd): Dawn Gray

transporting waste and soil from the site. A discussion of other transportation concepts considered but dismissed from detailed analysis is included in Chapter 2, Section 2.2.3 of this Final EIS.

Two of the soil remediation alternatives DOE evaluated reduce the amount of soil that must be removed from SSFL. These alternatives focus on identifying and removing the most contaminated soil. Under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, only low concentrations of chemicals and/or radionuclides would remain. Refer to Chapter 2, Sections 2.3 and 2.4 for descriptions of the soil remediation alternatives and the corresponding soil volumes that would be removed.

- 83-3 Please refer to Sections 2.7, "Offsite Impacts," and 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussions of contamination and illnesses within the vicinity of SSFL, including discussions of the studies of incidences of offsite cancers.
- 83-4 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 84: Gayle Hickerson

RE: Comment on SSFL Draft Environmental Impact Statement

I would like the Santa Susana Field Laboratory
toes area cleaned up.

84-1

84-1

DOE acknowledges your preference for a cleanup of the SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Note that there are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of that work. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Signed:

Gayle Hickerson

Commenter No. 85: Milissa Osping

RE: Comment on SSFL Draft Environmental Impact Statement

There is no question on whether the site needs to be cleaned up! Yes! Clean it up to legal standards!

I was on well water below SSFL and the child I was carrying had cancer. My other two children had Alopecia and my eldest had to have baby root canal at 2 yrs. old. I have many pictures of deformed vegetables at our home garden during the time and pets died. Clean it up NOW!
Signed: Milissa Osping

85-1

85-1

DOE's cleanup will comply with applicable legal standards. As stated in Chapter 1, Section 1.1, of this EIS, DOE's purpose and need is to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements.

85-2

85-2

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of data on offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can continue. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with the CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Cleanup will continue following completion of these actions.

Commenter No. 86: Anonymous

DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR REMEDIATION OF AREA IV AND
THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY

PUBLIC HEARING COMMENT FORM

PLEASE PRINT LEGIBLY

Location: Simi Valley CA Date: 2/18/17

See Attached Comment Sheet

~~Anonymous Concerned Citizen~~
Anonymous Concerned Citizen

**** CONTINUE ON BACK FOR MORE SPACE ****

Name: Anonymous Concerned Citizen

Organization: N/A

Address: Anonymous

City/State/Zip: Simi Valley 93063

Yes, include my name and address on the mailing list so I can receive information on the EIS. No, do not include my name and address on the mailing list.

If you provide your name, it will appear along with your comment in the Final EIS unless you request otherwise. If you do not want your name included with your comment in the Final EIS, please check here.

Please turn in this form at the meeting or mail by March 14, 2017, to:

Ms. Stephanie Jennings, NEPA Document Manager, SSFL Area IV EIS,
U.S. Department of Energy, 4100 Guardian Street, Suite 160, Simi Valley, CA 93063

Or submit comments via our website: www.SSFLAreaIV/EIS.com

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Commenter No. 86 (cont'd): Anonymous

Please address my anonymous comments on the DEIS:

- DOE has violated NEPA ONCE AGAIN. Signing the AOC without doing an environmental analysis is a violation of NEPA LAW. Period. I request a chapter addressing how and why DOE chose this cleanup. SB990 was proven unconstitutional, and it appears DOE does not have the intestinal fortitude to stand up to the environmental elected officials. I thought this was DOE mission?
- I believe a thorough evaluation on the importance of the lab from a Native American perspective is needed. The DEIS should go further and ensure the special place is preserved if the risk based areas are cleaned up.
- DOE has done a miserable job communicating to the public what the site condition currently is. I only see articles and interviews from these insane activists. I want to see DOE look us in the eyes and tell us how the site is now, and what really remains.
- The land use scenarios are not a full and accurate depiction of reality. The site will be open space according to Boeing. Why was this not evaluated as a realistic alternative?
- The DEIS does not do a good job explaining the cancer perception to the surrounding communities. This needs to be expanded and articulated so the average citizen can understand.
- The cumulative effects of the cleanup are weak; they need to show the effects from the other party's cleanup on the surrounding communities.
- The SSFL is a corridor for wildlife. DOE must follow state and federal laws to protect species that are listed for both agencies.
- The background evaluation done by DTSC is inadequate. If you compare values from pristine locations around CA and America, they will be called 'contaminated'. DOE should perform a comparative evaluation with other parts of the US, and communicate the insanity of the AOC in the revision.
- Finally, I support a cleanup consistent with open space and the principles in superfund cleanup sites. I do not support the waste of taxpayer monies.

86-1

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- 86-1 In 2007, DTSC issued the Consent Order for Corrective Action (2007 CO), which required DOE to complete an EIS for the cleanup of SSFL Area IV prior to relinquishing control over any portion of Area IV. DOE entered into the 2010 Agreement on Consent (AOC) under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to “advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety” (42 U.S.C. 7112(13)). The AOC also requires DOE to complete an EIS prior to initiating any cleanup activities at SSFL. Consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research, DOE is preparing this current EIS to evaluate the potential impacts of the major Federal action of performing the final clean up SSFL Area IV and the NBZ. Hence, DOE is not violating NEPA by performing this EIS subsequent to signing the AOC.
- 86-2 DOE been proactive in evaluating the importance of SSFL from the Native American perspective, in particular in Area IV and the NBZ, the only areas where DOE has jurisdiction. This understanding is illustrated through 1) DOE's extensive program of consultation (please refer to Chapter 4, Section 4.11.4 and Appendix E, Consultations), 2) the inclusion of Native American perspectives (see Chapter 9, Native American Histories and Perspectives, in this Final EIS), and 3) DOE's commitment to creating a Programmatic Agreement that is compliant with NHPA Section 106.
- 86-3 DOE acknowledges your concern. There are currently no additional public meetings planned for the near future. Chapter 3 describes the affected environment in and around SSFL Area IV and the NBZ. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.
- 86-4 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and

Commenter No. 86 (cont'd): Anonymous

the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS was revised to consider the Boeing open space scenario in accordance with the restrictions in the conservation easements. The reader is referred to the various resource impact analyses presented in Chapter 4 of this Final EIS.

- 86-5** DOE acknowledges your comment and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. Section 2.8 also discusses causes and the incidence rate of cancer. DOE also refers you to Chapter 3, Section 3.9 5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 86-6** Please see Section 2.7, Offsite Impacts, of this CRD for a discussion and DOE’s response to concerns about offsite impacts. A discussion of the potential cumulative impacts on human health for the offsite public was added to Section 5.5.9 of this Final EIS.
- 86-7** DOE is following both State and Federal laws to protect biological resources, including sensitive species and their habitat.
- 86-8** DOE notes your concern about the background evaluation for constituents of concern. Chapter 2, Section 2.3.3.1, of this Final EIS, discusses the implementability of the 2010 AOC, including difficulties associated with defining and cleaning up soils to background levels.
- 86-9** DOE acknowledges your support for site remediation consistent with the principles implemented for cleanup of CERCLA sites. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Please also note that DOE does not own the property in Area IV or the NBZ and cannot determine the ultimate land use for the property. As discussed in Chapter 2, Section 2.2.3, of the EIS, the property owner, Boeing intends to preserve the land as open space for the public’s benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

Commenter No. 87: Anonymous

- The proposed action appears to be precedent setting. To not perform an environmental analysis before signing such agreement appears to be a violation of NEPA. NEPA requires such analysis before signing to this AOC agreement. The EIS should explain in vast detail so the public can understand why DOE chose to sign such a terrible deal. Explain why this is a legal and needed agreement.
- The proposed action appears to not be in compliance with CA Health and Safety Code, Chapter 6.8, which requires a risk evaluation before an action.
- It appears that the \$41.5 Million given to EPA, via a CA law was a waste of taxpayers dollars. The EPA Final Tech Memo clearly articulates this site is not a radiological concern. DOE should be held accountable for signing this fraudulent agreement, clearly a waste of taxpayers dollars, and for what?
- SB990 was a terrible law, and was ruled unconstitutional. Why is this site still the only site in CA being held to such a higher standard? The EIS should explain why it is being cleaned to such a strict standard, versus the norm. The EIS is silent on this fact, government too big and not accountable.
- DOE needs to include in your analysis, realistic land use in its evaluation. The recreational user should be analyzed. The site will be open space says Boeing, no residential neighborhoods, no one living there. The recreational option would let the community know real risks, for a realistic land use.
- Why is DOE considering such a conservative land use? Explain to us taxpayers why this makes sense.
- DOE should also protect Cultural Resources and ensure the Endangered Species Act is complied with. I think DOE should also explain why it let the DTSC decide what species is exempt/protected in the EIS. It appears this is a Federal authority and the EIS should also explain this precedent setting decision, the EIS is **SILENT ON IT**. That is not acceptable, NEPA is supposed to be about informing the community.
- Lets make CA great again.

87-1

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cont'd

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87-1 In 2007, DTSC issued the Consent Order for Corrective Action (2007 CO), which required DOE to complete an EIS for the cleanup of SSFL Area IV prior to relinquishing control over any portion of Area IV. DOE entered into the 2010 Agreement on Consent (AOC) under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to “advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety” (42 U.S.C. 7112(13)). The AOC also requires DOE to complete an EIS prior to initiating any cleanup activities at SSFL. Consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research, DOE is preparing this current EIS to evaluate the potential impacts of the major Federal action of performing the actual clean up SSFL Area IV and the NBZ. Hence, DOE is not violating NEPA by performing this EIS subsequent to signing the AOC.

87-2 The reader is referred to Final EIS Chapter 2, Sections 2.1 and 2.2 for discussions regarding the history and legality of the AOC.

DTSC did not enforce SB 990 with respect to DOE, so DOE was under no duress attributable to SB 990 when the 2010 AOC was negotiated. The 2010 AOC states that DTSC agreed that compliance with the 2010 AOC would constitute DOE compliance with applicable provisions of the California Health and Safety Code (Section 1.6), including Senate Bill 990. However, after the law was declared unconstitutional, SB 990 was no longer enforceable.

87-3 The 2010 AOC states that compliance with the Order and the 2007 Consent Order constitute compliance with all applicable provisions of Chapter 6.5 and 6.8 of Division 20 of the California Health and Safety Code.

Note also that both the Draft and this Final EIS include alternatives with cleanup levels that are based on risk. In its evaluation of environmental consequences, this Final EIS evaluates risk for each of the soil remediation alternatives. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, “Human Health,” of this EIS.

87-4 DOE engaged EPA to conduct radiological characterization of Area IV and the NBZ pursuant to the Federal Consolidated Appropriations Act of 2008 (H.R. 2764). This study provided valuable information regarding the locations of radiological constituents in Area IV and the NBZ. As shown in Chapter 2, Figure 2–1, the locations with radiological constituents exceeding the provisional radiological LUT values are well

Commenter No. 87 (cont'd): Anonymous

delineated. The radiological characterization, along with chemical characterization of Area IV and the NBZ provide the data used by DOE in developing the three soil remediation action alternatives, all of which are protective of human health and the environment. Because of the characterization they performed, EPA was able to state, “Approximately 70 percent of soil samples with radionuclide concentrations greater than the [field action levels] are located within five Area IV Radiological Areas of Interest.”

87-5 Risk analysis scenarios are based on the most-likely future land uses. The future use of the SSFL property is that of open space, hence the EIS evaluates a recreational user scenario. The EIS also evaluates a residential scenario as a conservative risk analysis and for use in comparison to risks to a recreational user. This Final EIS was revised to consider the Boeing open space scenario in accordance with the restrictions prohibiting residential, agricultural, or commercial development or uses of the site, in the conservation easements finalized in 2017. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ.

87-6 Please refer to Section 2.3 “Application of Exemptions under the 2010 Administrative Order on Consent” of this CRD for a discussion of this topic and DOE’s response. To clarify, DTSC did not decide what species are exempt or protected in the EIS. With regard to the number of protected species reviewed in the Draft EIS, the EIS preparers used accepted professional practice to include information about threatened or endangered species (either listed federally or by California) that could possibly occur on a site (based on their distributions and ecological requirements) before narrowing to species known or expected to occur on the site based on review of this information and field surveys. The number of species identified in this Final EIS reflects the results of the Biological Opinion from the USFWS (with input from the CDFW). This process is explained further in Chapter 3, Section 3.5.5, “Threatened, Endangered, and Rare Species” of this Final EIS; the species and habitats identified for protection are discussed in Appendix B, Section B.5. Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD, for additional information on this topic.

Tables 3-6 and 3-7 list plant and animal species that are known to be present within Area IV and the NBZ or the potential for occurrence of the species in the region of influence for each species.

Commenter No. 88: Anonymous

Please consider my comments on the DEIS DOE Mrs. Jennings,

- So DOE did some type of NEPA document and was sued for not following the law. And what does DOE do? Sign this 'cleanup to background' before performing an evaluation! This is criminal, I believe this is fraud, waste and abuse by the government. I do believe DOE had the legal right to obligate the taxpayers for so much money without any consequence. I demand that the FINAL explain in clear, plain English how it was ruled that this is ok for the taxpayer. The DEIS is woefully silent in explaining this to the community. I thought the DEIS is supposed to inform the community. This part is missing.
- DOE has used VERY conservative assumptions and does not fully evaluate the impacts to the site. The soil volumes should have a range with accepted construction cleanup numbers of -30% to +50%. The volumes should not be this precise. It gives me the impression DOE has already developed plans to complete the alternatives, instead of proposing them.
- The AOC cleanup should not be the 'proposed action'. How can DOE explain how this dang thing is terrible for the site and then make it the proposed action. This makes absolutely NO COMMON SENSE.
- Why is on site disposal not evaluated? This is a mistake and the revision should evaluate using on site disposal. The DEIS only says the AOC WILL NOT ALLOW IT. This is not a legitimate technical rationale answer to not performing an on site disposal and reducing air pollution and truck traffic.
- The clean up to background by using some point by point evaluation is legally precedent setting. I believe our President should be made aware of this decision. I request that DOE state in the revision how it has ensured this has been communicated to the President. I need the legal language to show why this is acceptable clearly in the document.
- I would like to see a comparison of other DOE sites to compare the AOC agreement versus a normal risk based cleanup using area averaging. I request DOE explain why this difference is acceptable to tax payers.

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88-1 In 2007, DTSC issued the Consent Order for Corrective Action (2007 CO), which required DOE to complete an EIS for the cleanup of SSFL Area IV prior to relinquishing control over any portion of Area IV. DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to “advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety” (42 U.S.C. 7112(13)). The AOC also requires DOE to complete an EIS prior to initiating any cleanup activities at SSFL. Consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research, DOE is preparing this Final EIS to evaluate the potential impacts of the major Federal action of performing the final clean up SSFL Area IV and the NBZ. Hence, DOE is not violating NEPA by performing this EIS subsequent to signing the AOC.

88-2 Since the Draft EIS was prepared, DOE has independently evaluated the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data and an improved understanding of the soil depth over uneven bedrock across Area IV and the NBZ, DOE is not as uncertain about the upper volume of soil estimate as it was at the time the Draft EIS was prepared. Nevertheless, this Final EIS retains as a conservative assumption the estimate of 881,000 cubic yards of soil that would be removed from SSFL under the Cleanup to AOC LUT Values Alternative. Similar to the Draft EIS, this Alternative would not remove 115,000 cubic yards of soil for the cultural and biological resources exemptions or 620,000 cubic yards of soil for the monitored natural attenuation of TPHs.

For further disclosure DOE has added a sensitivity analysis to assess the potential impacts of removing a larger volume of soil under the Cleanup to AOC LUT Values Alternative (see Appendix L). The sensitivity analysis evaluates impacts associated with removing 1,900,000 cubic yards of soil. This volume is based on 1,616,000 cubic yards of soil exceeding AOC LUT values (includes areas exempt to protect cultural and biological resources and for monitored natural attenuation of TPHs, times an uncertainty factor of 20 percent.

88-3 The proposed action for soil remediation presented in the Draft EIS was selected because it reflected the agreement signed between DOE and the State of California, the 2010 AOC. This Final EIS retains an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed soil remediation

Commenter No. 88 (cont'd): Anonymous

alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for soil cleanup of SSFL Area IV and the NBZ.

- 88-4 Onsite disposal options were eliminated from analysis in this EIS because the 2010 AOC does not allow onsite burial or landfilling (excavating and burying) of contaminated debris or soil. Boeing owns the land in Area IV and the NBZ. DOE's intent is to complete its cleanup responsibilities, then relinquish the land to Boeing's control. DOE does not want any enduring responsibility for a landfill created on site.
- 88-5 In accordance with responsibilities assigned by Congress, the Secretary of Energy and Assistant Secretary for Environmental Management are the appropriate levels within the President's administration to be informed of the analyses and decisions being made with respect to this EIS and DOE's cleanup at SSFL.
- 88-6 NEPA does not require comparison to actions at other DOE sites. DOE did compare to risk-based cleanups at two California locations; Hunters Point Naval Shipyard and McClellan AFB (see Appendix D, Section D.3, of this Final EIS).

Commenter No. 89: Anonymous

Please find my anonymous comments:

- The proposed action appears to not be in compliance with CA Health and Safety Code, Chapter 6.8, which requires a risk evaluation before an action. It needs to be explained in the Final EIS, why the AOC alternative is ignoring CA code Chapter 6.8. The public should be made aware why decisions are made.
- It appears that the signing of the AOC before performing an evaluation is a violation of FEDERAL LAW that is known as NEPA. The Final should explain why this is legal for the taxpayer footing the bill. This agreement is clearly a waste of taxpayer dollars, and for what reduction in risk to the community? Less than 1% does not justify spending an additional \$500 Million.
- The site will have a final land use of recreational, so why is DOE evaluating suburban-residence or background? This is a very conservative approach, and it is inconsistent with how EPA does superfund sites. The EIS should explain why it is being cleaned to such a strict standard, versus the norm that is used elsewhere.
- DOE agreed to the AOC without the land owner agreeing. The final needs to articulate how this is legal and withstanding any challenges. This needs to be communicated to the public how this occurred with consent from Boeing.
- My guess is that it appears Obama did this terrible deal and left it for Trump. Explain how DOE will ensure that the President is aware of the burden that has been placed on the taxpayers by DOE bureaucrats in the final EIS. This appears to a waste of tax payers money and is fraud, waste and abuse.
- DTSC is suppose to be working with DOE. The Final has to communicate how it will handle any negotiation on the AOC with DTSC. The communication to the public should not be very vague and not explain what DOE is doing. There is supposed to be transparency.
- PLEASE PLEASE PLEASE, "let's make America great again"!

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89-1 The 2010 AOC states that compliance with the Order and the 2007 Consent Order constitute compliance with all applicable provisions of Chapter 6.5 and 6.8 of Division 20 of the California Health and Safety Code.

Note also that both the Draft and this Final EIS include alternatives with cleanup levels that are based on risk. In its evaluation of environmental consequences, this Final EIS evaluates risk for each of the soil remediation alternatives. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS.

89-2 DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to "advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety" (42 U.S.C. 7112(13)). Consistent with the DOE Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research, DOE is preparing this current EIS to evaluate the potential impacts of the major Federal action of performing the actual cleanup of SSFL Area IV and the NBZ.

89-3 Thank you for your comment. It has been included in the Administrative Record for the EIS. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. DOE performed a cost-benefit analysis of the soil remediation alternatives as part of this EIS (see Appendix K). The results of the analysis show that the cleanup under the Cleanup to 2010 AOC LUT Values Alternative would be much more expensive and with minimal additional protection of public health and the environment compared to the other project soil remediation alternatives.

89-4 At the time the Draft EIS was developed, Boeing had stated its intent to cleanup based on a suburban resident scenario as a measure of conservatism. To be consistent, DOE included the suburban resident scenario as the basis for alternatives evaluate in the Draft EIS. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS added the open space scenario under its Conservation of Natural Resources Alternative.

Commenter No. 89 (cont'd): Anonymous

- 89-5 As the party responsible for the cleanup of Area IV and the NBZ, DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to “advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety” (42 U.S.C. 7112(13)).
- 89-6 In accordance with responsibilities assigned by Congress, the Secretary of Energy and Deputy Assistant Secretary for Environmental Management are the appropriate levels within the President’s administration to be informed of the analyses and decisions being made with respect to this EIS and DOE’s cleanup at SSFL.
- 89-7 DOE has added additional information and clarification on the role of DTSC in Chapter 1, Section 1.4 of this Final EIS.

Commenter No. 90: William McNally and Barbara Rain

Department of Energy Comment: Re: 1959 Santa Susana Nuclear Lab (SSNL) Accident: Victim

We are writing to inform you that my wife, Barbara Lisa Rain, born December 1957 in Encino, CA resided at her family's single-family residence in Granada Hills (Yarmouth Ave.) from 1958-1976, approximately 4-5 miles north by northeast of the elevated Santa Susana Nuclear Laboratory Accident Site. At the time of the Accident, estimated to be June-July 1959, Barbara was an 18 month-old infant, probably outdoors and downwind from the nuclear reactor Site perched on a bluff overlooking the northwestern corner of the San Fernando Valley.

Between 1970-71, Barbara's father, an MD internist, noticed she had a goiter and in fact her thyroid, which is naturally supposed to turn-on at puberty, did not function. Since 99% of thyroid failures have to do with exposure to toxic and radioactive substances it is safe to conclude that Barbara, as a 1 1/2 year old infant, perhaps during the event, was outside and directly exposed to the burst of radiation. Even if she were not directly exposed, the yard grass and pavement she daily played upon was. Everything in the area had been sprinkled lightly with cancer-causing radioactivity. Infants, we now know, are the most vulnerable to radioactive exposure.

For the past 48 years Barbara has had to take thyroid medication to compensate for her non-functioning thyroid. Over the decades she has been exposed to the wide-ranging, always changing medical protocol for taking thyroid medication. From the 1970s through the 90s Barbara took 240 mg./day of natural thyroid. Since then, that dose has been reduced to 90 mg./day. Over the years, there has been an on-going campaign to eliminate natural thyroid in favor of synthetic, a cheaper material. Currently she is bureaucratically fighting her medical provider, Kaiser, over what thyroid materials are approved and which are not, i.e. natural vs. synthetic. Over the years the medical community has utilized and denied the very same treatment protocol. In a certain sense Barbara knows more from her personal experience than a young medical resident. In short, the travail over not having a functioning thyroid and its impact on her health maintenance goes on every single day. This daily hassle of compensating for a non-functioning thyroid is not something we want anyone to experience.

There should be no equivocating from the government regarding the removal of radioactive toxic materials, especially since this was in fact a government created and covered up problem, one the medical community struggles to get agreement over. Five years ago an activist concerned with the water runoff of the Santa Susana accident site into adjacent neighborhoods showed me a number of official studies done by the State and by the Feds over the radioactive toxicity (perchlorate, tritium) at the Site and its gravitational migration down into surrounding areas. There can be no moral slippage. The government (Department of Energy) and Boeing are obligated to clean up a health hazard -- if these studies are to be believed -- they created in a residential community that still exists.

Emotionally, Barbara was furious that the 1959 nuclear accident was for thirty years kept a secret from those very citizens who were exposed to the dangerous radiation. This subterfuge was malice. Now you, Dept. of Energy, have the opportunity to make sure no one else loses their thyroid over government malfeasance.

Thank you.

William McNally Barbara L Rain

04-13-17

William McNally & Barbara L Rain

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DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE (and its predecessor agency) has not kept the Sodium Reactor Experiment (SRE) accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atomics International 1959). The accident was also described in detail in a reactor safety textbook, *The Technology of Nuclear Reactor Safety* published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html

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Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

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cont'd

Commenter No. 91: Lijin Sun,
South Coast Air Quality Management District



SENT VIA USPS AND ONLINE:

April 12, 2017

<http://www.ssfareaijeis.com/comment.aspx>

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

**Draft Environmental Impact Statement (DEIS) for Remediation of Area IV and the Northern
Buffer Zone of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS) (DOE/EIS-0402)
(SCH No.: 2017014002)**

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final EIS.

SCAQMD's 2016 Air Quality Management Plan

Adopted on March 3, 2017, the 2016 Air Quality Management Plan (2016 AQMP) is a regional blueprint for achieving air quality standards and healthful air in the South Coast Air Basin. Built upon the progress in implementing the 2007 and 2012 AQMPs, the 2016 AQMP provides a regional perspective on air quality and lays out the challenges facing the South Coast Air Basin. The most significant air quality challenge in the Basin is to reduce an additional 45 percent reduction in nitrogen oxide (NOx) emissions in 2023 and an additional 55 percent NOx reduction beyond 2031 levels for ozone attainment. For more information on the 2016 AQMP, please visit the SCAQMD's website, at: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>.

Proposed Action

The proposed action consists of the remediation of impacted soil and groundwater, the removal of existing facilities, the disposal of resulting waste, and the restoration of the affected environment in Area IV of the Santa Susana Field Laboratory (SSFL) in Ventura County. The 290-acre Area IV is bounded by the 182-acre buffer zone to the north and the 114-acre Area III to the south. Boeing is the owner of Area IV, Area III, and the northern buffer zone area, while U.S. Department of Energy ("DOE" or "Lead Agency") owns the existing buildings in Area IV and is responsible for building demolition and cleanup of soils and groundwater in Area IV. Contaminated soils and resulting waste would be hauled by trucks traversing through Woolsey Canyon Road to nearby (Buttonwillow or Westmorland facilities in California) and distant (Nevada National Security Site or U.S. Ecology in Idaho) disposal sites. The proposed action is expected to occur over a 15-year period.

Air Quality Analysis

Based on a review of Tables 4-37 and 4-38 in Chapter 4.6, *Air Quality and Climate Change*, of the DEIS, the SCAQMD staff found that the unmitigated peak NOx emissions generated by truck travelling between SSFL and the nearby disposal sites would be within a range of 47 to 70 pounds per day or 10 to 250 tons per year, and disposing at the distant disposal sites would generate 110 to 140 pounds per day or 25 to 250 tons per year of NOx emissions.

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Commenter No. 91 (cont'd): Lijin Sun,
South Coast Air Quality Management District

Ms. Stephanie Jennings

Page 2

April 12, 2017

The SCAQMD has developed regional air quality CEQA significance thresholds. Because the proposed construction period would occur over a length of 15 years, it more closely resembles the characteristics of project operation. Therefore, the SCAQMD staff recommends that the Lead Agency quantify the project's criteria pollutant emissions within the South Coast Air Basin and compare the results to the SCAQMD's regional operational thresholds¹ to determine the air quality impacts.

Mitigation Measure

In Chapter 6, *Measures to Minimize Impacts and Mitigation Measures*, on page 6-17 of the DEIS, the Lead Agency is committed to using green fleets which are "a fleet of trucks no more than 5 years old" for on-road trucks (see Mitigation Measure AQ-1 in Table 6-2, *Potential Mitigations*). The Lead Agency found that using green fleets would "reduce emissions from the average calendar year 2019 truck fleet by 61 percent in the South Coast Air Basin" and that "the peak annual truck emissions within the Basin would be below the emission thresholds" (see page 4-86 of the DEIS). Based on the SCAQMD staff's understanding of the description for Mitigation Measure AQ-1, the Lead Agency is committed to using 2019 model year diesel trucks during construction. As stated above, the proposed construction period would occur over a length of 15 years. Assuming that the proposed construction would begin in year 2019, the proposed construction would be completed in year 2034. As such, using 2019 model year diesel haul trucks for construction beginning from year 2025 will not meet the Mitigation Measure AQ-1 requirement, and newer diesel haul trucks will be required (see Table 1). The SCAQMD staff recommends that the Lead Agency specify which model year haul trucks will be used during construction in the Final EIS.

Table 1

Construction Years	Model Year Diesel Haul Trucks Based on the Description of Mitigation Measure AQ-1
2019-2024	2019
2025	2020 or newer
2026	2021 or newer
2027	2022 or newer
2028	2023 or newer
2029	2024 or newer
2030	2025 or newer
2031	2026 or newer
2032	2027 or newer
2033	2028 or newer
2034	2029 or newer

The SCAQMD staff commends the Lead Agency's commitment to using diesel haul trucks newer than 2010 model year. As described in the 2016 AQMP, to achieve NOx emissions reductions in a timely manner is critical to attaining the National Ambient Air Quality Standard (NAAQS) for ozone before the 2023 and 2031 deadlines. SCAQMD is committed to attain the ozone NAAQS as expeditiously as practicable. The proposed action plays a role in contributing to Basin-wide NOx emissions. The Lead Agency's commitment to using green fleets throughout the entire construction phase is consistent with the SCAQMD's commitment to NOx emissions reductions and ensures that the South Coast Air Basin is on track to attain the NAAQS.

¹ South Coast Air Quality Management District. March 2015. *SCAQMD Air Quality Significance Thresholds*. Available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>.

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The durations of activities proposed in the SSFL Area IV EIS range from a low of 4 years for the Conservation of Natural Resources Open Space Scenario Combined Alternatives, to a high of 28 years for the Cleanup to AOC LUT Values Combined Alternatives. This Final EIS uses the following thresholds to evaluate air quality impacts from proposed DOE cleanup activities within the South Coast Air Basin: (1) an EPA Prevention of Significant Deterioration threshold for a pollutant that attains a national ambient air quality standard (NAAQS) and (2) a general conformity *de minimis* threshold for a pollutant that does not attain a NAAQS. Therefore, this approach is sensitive to the existing air quality conditions within the region and it is applicable to either construction or operational activities. This EIS also qualitatively determines whether emissions from proposed activities would produce localized impacts that would contribute to an exceedance of an ambient air quality standard. DOE considers these thresholds to be appropriate for purposes of evaluating air quality impacts from the proposed SSFL project alternatives within the South Coast Air Basin, as they are based on approved regulations.

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Draft EIS Mitigation Measure AQ-1 proposed to implement a haul truck fleet where individual trucks would be no more than 5 years old during each year of cleanup activities. This measure would ensure that all project trucks would have (1) the newest or relatively new on-road emission standards and (2) a minimum level of engine deterioration and resulting degradation in emissions due to being relatively young in age. For example, in year 2019, the oldest trucks allowed in the project fleet would be model year 2014. Similarly, in year 2034, the oldest truck allowed in the fleet at that time would be model year 2029. To respond to the comment, DOE revised the wording of this initiative in this Final EIS to more clearly state the goal that individual on-road trucks within the project fleet would be no more than 5 years old during each year of cleanup activities.

Commenter No. 91 (cont'd): Lijin Sun,
South Coast Air Quality Management District

Ms. Stephanie Jennings

Page 3

April 12, 2017

SCAQMD staff is available to work with the Lead Agency to address these issues and any other questions that may arise. Please contact me at lsun@aqmd.gov, if you have any questions regarding the enclosed comments.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

JW:LS
ODP170405-01
Control Number

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Commenter No. 92: Scott Morgan, Director,
State Clearinghouse



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

April 14, 2017

Stephanie Jennings
U.S. Department of Energy
4100 Guardian St, Suite 160
Simi Valley, CA 93063

Subject: Draft EIS for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory
SCH#: 2017014002

Dear Stephanie Jennings:

The State Clearinghouse submitted the above named Draft EIS to selected state agencies for review. The review period closed on April 13, 2017, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

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Thank you for your notification of compliance regarding the State Clearinghouse review requirements for draft environmental documents, pursuant to CEQA.

Commenter No. 92 (cont'd): Scott Morgan, Director,
State Clearinghouse

Document Details Report
State Clearinghouse Data Base

SCH# 2017014002
Project Title Draft EIS for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory
Lead Agency U.S. Department of Energy

Type EIS Draft EIS
Description Note: Extended Review per lead

This Draft SSFL Area IV EIS analyzes the potential environmental impacts of alternatives for conducting cleanup activities in Area IV of the Santa Susana Field Laboratory and the adjoining Northern Buffer Zone, located in Ventura County, CA. Remediation is needed to clean up residual chemicals and radionuclides from historical DOE operations at the ETEC in Area IV, in compliance with regulations, orders, and agreements. The alternatives analyzed in this draft EIS involve the disposition of remaining DOE facilities and support buildings, remediation of soil and groundwater, and disposal of all resulting waste at existing licensed or permitted facilities in a manner that is protective of the environment and the health and safety of the public and workers.

Lead Agency Contact

Name Stephanie Jennings
Agency U.S. Department of Energy
Phone 805-842-3864 **Fax**
email
Address 4100 Guardian St, Suite 160
City Simi Valley **State** CA **Zip** 93063

Project Location

County Ventura
City Simi Valley
Region
Lat / Long 34.2° N / 118° W
Cross Streets
Parcel No. Geographic NAD 83
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use GPD: Open space; non coastal zoning ordinance; area IV Zoned rural ag

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Economics/Jobs; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Noise; Recreation/Parks; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services, California; Resources, Recycling and Recovery; California Highway Patrol; Caltrans, District 7; State Water Resources Control Board, Division of Drinking Water, District 6; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; California Energy Commission; Native American Heritage Commission

Date Received 01/17/2017 **Start of Review** 01/17/2017 **End of Review** 04/13/2017

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**Commenter No. 93: Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901
April 12, 2017

Stephanie G. Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, California 93063

Subject: Draft Environmental Impact Statement (DEIS) for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory, Ventura County, California (CEQ# 20170002)

Dear Ms. Jennings:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

We acknowledge the complexity of the cleanup being taken on by the Department of Energy (DOE) at the Santa Susana Field Lab (SSFL), including the fact that DOE does not own any land at SSFL, but is the owner of 18 buildings in Area IV and is responsible for building demolition and cleanup of soils and groundwater in Area IV and the Northern Buffer Zone (NBZ). Boeing owns the land within Area IV and the NBZ, as well as additional land within Area I, Area III, and the Southern Buffer Zone. Area II and part of Area I are owned by the Federal Government and administered by the National Aeronautics and Space Administration (NASA). The California Department of Toxic Substances Control (DTSC) is leading the oversight of cleanup activities.

DOE's cleanup strategy has three major components: cleanup of chemically and radiologically impacted soil; building demolition and disposal; and groundwater remediation. In 2010, DOE entered into an *Administrative Order on Consent for Remedial Action* (2010 AOC) with DTSC. The 2010 AOC requires the application of soil cleanup standards based on Look-Up Table (LUT) values, which are local background concentrations or laboratory method detection limits. DOE's proposed action, the Cleanup to the AOC LUT Values Alternative, would implement the technical requirements of the 2010 AOC. Two other soil cleanup alternatives, the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative, would meet the cleanup objectives to be protective of the environment and the health and safety of the public and workers based on risk calculations, while avoiding some of the technical challenges and potential adverse environmental impacts associated with soil cleanup to background or method detection limits. Notwithstanding the apparent constraints of the AOC, the DEIS presents these as reasonable alternatives to the proposed action; and EPA has evaluated them as such.

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**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

The DEIS does not identify a preferred alternative; therefore, we are rating all of the alternatives evaluated in the DEIS. We have rated the Building Removal Alternative, Groundwater Monitored Natural Attenuation Alternative and Groundwater Treatment Alternative as LO - Lack of Objections (see Enclosure: "Summary of EPA Rating Definitions"). We have rated all three action alternatives for the soil remediation as EC-2 - Environmental Concerns - Insufficient Information. Our concerns regarding the soil remediation alternatives are based on the project's potential impacts to air quality. The proposed heavy equipment usage and numerous truck trips on Woolsey Canyon Road and other routes, over a period of two years to greater than ten years (depending on the alternative selected), would result in significant emissions of oxides of nitrogen (NOx), and it is not clear whether the project would conform to the State Implementation Plan (SIP) to meet the national standards for air quality. We recommend that the Final Environmental Impact Statement (FEIS) discuss how DOE will ensure that the project does not interfere with the SIP, and include a draft conformity determination if a conformity determination will be needed. We also recommend that the FEIS identify DOE's preferred alternatives for soil excavation, building removal, and groundwater cleanup. The enclosed Detailed Comments elaborate on our concerns and include additional recommendations regarding contaminated soils, water resources, air quality mitigation, traffic, cumulative impacts, preservation of historic resources, and greener cleanups.

The DEIS acknowledges DOE's trust responsibilities to the Santa Ynez Band of Chumash Mission Indians, and we encourage you to continue to consult with the tribe and address their concerns about the archaeological and cultural resource investigations performed for this project. If DOE determines that any part of the Federal land is a Sacred Site or Traditional Cultural Property, we also encourage you to work proactively with the California DTSC and tribal representatives to mitigate the project's potential impacts.

The DEIS includes several references to EPA conducting verification sampling. Please clarify, in the FEIS, that EPA has no current or anticipated role in the cleanup, and any involvement in verification sampling would be contingent on future agreements and funding.

EPA appreciates the opportunity to comment on the DEIS. When the FEIS is released for public review, please send one electronic and one hard copy to the address above (mail code: ENF 4-2). If you have any questions, please contact me at [redacted] or have your staff contact Jeanne Geselbracht, the lead reviewer for this project. Jeanne can be reached at [redacted]

Sincerely,

 Kathleen Martyn Goforth, Manager
 Environmental Review Section

Enclosures: Summary of EPA Rating Definitions
 EPA's Detailed Comments

93-1

93-2

93-3

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- 93-1 DOE acknowledges EPA's rating of the alternatives for groundwater remediation, building removal, and soil remediation.
- 93-2 This Final EIS includes additional information to demonstrate that the soil remediation alternatives comply with the State Implementation Plan to meet the national standards for air quality. This Final EIS demonstrates that emissions from each unmitigated soil remediation alternative, as well as from combinations of action alternatives (for soil remediation, groundwater remediation, and building demolition combined), considered in this Final EIS would remain below the applicable conformity thresholds for each analysis domain and therefore would conform to the State Implementation Plan for each of these areas. This Final EIS adopts a version of the new truck fleet proposed in Draft EIS Mitigation Measure AQ-1 as a goal to further reduce unmitigated emissions.

The methods used to estimate emissions in this Final EIS for combinations of action alternatives are presented in the EIS reference, *EIS for Remediation of Area IV and the NBZ of the SSFL - Final Air Emissions Calculation Methods* (Leidos 2018b). Emission factors and activity data used to estimate emissions for the combinations of action alternatives are presented in Attachments 1.A, 1.B, 1.CRez, and 1.C-OS.
- 93-3 DOE identifies its Preferred Alternative(s) in Chapter 2, Section 2.7 of this Final EIS.

DOE's preferred alternative for soils remediation is the Conservation of Natural Resources, Open Space Scenario. Under this alternative, DOE would remediate Area IV and the NBZ to reduce the concentrations of chemical and radioactive constituents in the soil to levels necessary to protect human health and ecological resources.

DOE's preferred alternative for building demolition is the Building Removal Alternative. Under this alternative DOE would demolish the 18 DOE-owned buildings in Area IV and transport the resulting waste off site for disposal.

DOE's preferred alternative for groundwater remediation is a combination of the Monitored Natural Attenuation Alternative and the Treatment Alternative. Monitored natural attenuation would be used for the two plumes with the lowest concentrations of TCE (Metals Clarifier plume and the RMHF plume) and for the tritium plume. Treatment of the remaining plumes would be in accordance with the results of the Corrective Measures Study. Source removal is the preferred alternative for the strontium-90 source.
- 93-4 DOE plans to continue to consult with the SHPO, the Santa Ynez Band of Chumash Indians and other non-federally recognized tribes to develop a Programmatic

**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

Copy via electronic mail:

Ray Leclerc, DTSC, [redacted]
Stephen Henry, U.S. Fish and Wildlife Service, Ventura, [redacted]
Sam Cohen, Santa Ynez Band of Chumash Mission Indians, [redacted]
Jillian Wong, South Coast Air Quality Management District, [redacted]
Chuck Thomas, Ventura County Air Pollution Control District, [redacted]
Mary Meyer, California Department of Fish and Wildlife, [redacted]
Brendon Greenaway, State Historic Preservation Office, [redacted]

Agreement to ensure that impacts to cultural resources are avoided, mitigated, or minimized. DOE will also cooperate with DTSC to mitigate impacts to cultural resources.

93-5 This Final EIS reference to verification sampling by EPA reflects the language in the 2010 AOC (Section 2.12 "Confirmation Sampling"). DOE, however, acknowledges that EPA is not a signatory to the 2010 AOC and their involvement in verification would be contingent upon future agreements and funding. This Final EIS was revised to include an acknowledgement that EPA involvement would be under arrangements similar to those previously established for radiological characterization of Area IV and the NBZ.

**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

Category "1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category "2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category "3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

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**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

EPA DETAILED COMMENTS ON THE REMEDIATION OF AREA IV AND THE NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD LABORATORY DRAFT ENVIRONMENTAL IMPACT STATEMENT, VENTURA COUNTY, CALIFORNIA – April 12, 2017

Air Quality

General conformity requirements are intended to ensure that actions taken by federal agencies in air quality nonattainment and maintenance areas do not interfere with the State's plans to meet the national standards for air quality. General conformity is a two-step process that begins with an assessment of applicability, per 40 CFR 93.153. If general conformity is applicable to a federal action, EPA's regulations provide several criteria by which a federal action may be demonstrated to conform to the applicable state implementation plan (*see* 40 CFR 158). In the Draft EIS, tables 4-36 and 4-38 indicate that oxides of nitrogen (NOx) would exceed the applicable *de minimis* thresholds (pgs. 4-84 – 4-89) under each of the combined action alternatives; therefore, general conformity appears to be applicable to all of these alternatives. The DEIS does not, however, include a general conformity determination.

The DEIS discusses potential mitigation measure AQ-1: the use of cleaner off-road or construction equipment and cleaner on-road trucks. This mitigation measure could reduce the emissions of priority pollutants from the project; however, as a mitigation measure that may or may not be adopted in the Record of Decision, it cannot be considered in an applicability analysis for general conformity. If measures such as AQ-1 are incorporated as elements of the project and, consequently, are non-discretionary, the emissions reduction resulting from the measures may be considered in the general conformity applicability analysis.¹

Recommendations:

- Discuss, in the FEIS, how DOE would ensure that the project does not interfere with the State's plans to meet the national standards for air quality. If a conformity determination is needed, include the draft conformity determination in the FEIS.
- Consider incorporating mitigation measure AQ-1 as a specific element of the project so the reduced emissions can be considered in the general conformity applicability analysis of 40 CFR 93.153.
- If DOE plans to use offsets to demonstrate conformity, commit in the FEIS to fully offset emissions (i.e. to zero) of any pollutants for which the projected emissions would exceed the *de minimis* thresholds, as required by 40 CFR 93.158, and begin discussions with the appropriate air quality management districts as soon as practical.

If you have any questions regarding the requirements of EPA's Conformity Rule, please consult with Tom Kelly, EPA Region 9 Air Division. He can be reached at [REDACTED]

Water Resources

Groundwater Cleanup

The DEIS describes the on-going Resource Conservation and Recovery Act (RCRA) Corrective Measures Study being developed independently from the EIS to evaluate and select groundwater treatment technologies to be applied as remedial actions. We understand that DOE plans to submit the

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The *Draft RCRA Facility Investigation Groundwater Investigation Report for Area IV* (CDM Smith 2018a) and the *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) were completed after the issuance of the Draft EIS. The RCRA RI findings and results of the Corrective Measures Study (CMS) were used to inform the assessment in the EIS of the most likely groundwater remedies. DOE believes that the discussion of advantages and effectiveness of groundwater remedies is more applicable to the CMS. DOE will provide the CMS to EPA upon request. Regarding details of actions at the GWIM, multiple wells are being targeted for pumping as each

¹ General Conformity Guidance: Questions and Answers (Response to Question 29), July 13, 1994
https://www.epa.gov/sites/production/files/2016-03/documents/rcgqa_940713.pdf

**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

study to DTSC sometime in 2017, prior to DOE's Record of Decision for this project. We presume that information in that study is relevant to this EIS and will be useful for purposes of disclosure and decision making.

Within the Groundwater No Action Alternative discussion, the DEIS references the currently planned SSFL-wide groundwater interim measures, which include the Former Sodium Disposal Facility (FSDF) Groundwater Interim Measure to extract trichloroethylene-contaminated groundwater (pg. 2-50). The DEIS does not show the location of the extraction well or the lateral or vertical volume of groundwater the well is intended to capture. Nor does it describe the treatment method for extracted groundwater or identify its discharge location.

We found no information in the DEIS regarding contamination of the vadose zone below the depth of soil removal; therefore, it is unclear whether the vadose zone is contaminated or may be a potential source of groundwater contamination. We note that some of the technologies considered, such as soil vapor extraction, may be capable of effectively removing vadose zone contamination, depending on the local geology.

Recommendation: Provide the following information in the FEIS:

- A description of three-dimensional groundwater flow and contaminant migration at the site;
- an expanded discussion of the site's geology relevant to contaminant migration and treatment effectiveness;
- a detailed description of contaminant source areas (e.g., test stands, evaporation ponds, landfills, leach fields, etc.) and any vadose zone contamination;
- a description of the current and predicted future interactions of groundwater and surface water in the project area, including the locations of surface seeps;
- a thorough discussion of the current groundwater interim measures that are part of the Groundwater No Action Alternative, including their energy use and effectiveness;
- a brief summary comparison of the advantages and disadvantages of each technology evaluated; and
- identification and description of DOE's preferred groundwater cleanup technology and the basis for its selection.

Waters of the U.S.

The DEIS does not provide sufficient information on the existing conditions and functions of the waters at the project site. Page 4-61 references the US Army Corps of Engineers as having final determination of compensatory mitigation required as part of the permitting process under Section 404 of the Clean Water Act.

Recommendation: Provide the following information in the FEIS:

- Description of the conditions and functions of jurisdictional waters of the U.S. at the site.
- Discussion of the human and environmental risks posed by all site water features and description of the potential for direct impacts under each alternative.
- Disclose whether the project requires a Clean Water Act Section 404 permit for discharge of dredged or fill material into waters of the U.S. Pursuant to 40 CFR 230, any permitted discharge into waters of the U.S. must be the least environmentally damaging practicable alternative (LEDPA) available to achieve the project purpose. If cleanup activities would

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well encounters a separate bedrock fracture harboring water with VOCs. There are no discharges from this action as pumping only produces 10 to 20 gallons per month. Extracted groundwater is transported off-site for treatment. As described in Chapter 2, Section 2.7 of this Final EIS, a combination of the Monitored Natural Attenuation Alternative and the Groundwater Treatment Alternative is DOE's Preferred Alternative for groundwater remediation. Under this alternative, monitored natural attenuation would be used for the two plumes with the lowest concentrations of TCE (Metals Clarifier plume and the RMHF plume) and for the tritium plume. Treatment of the remaining plumes will be in accordance with the results of the Corrective Measures Study. Source removal is the preferred alternative for the strontium-90 source.

Additional information has been incorporated into Chapter 3, Section 3.4.3.1, regarding the operation of the Groundwater Interim Measure pumping well (RS-54) and the extent of the FSDF groundwater plume being treated with this well. The location of the FSDF treatment facility is shown in Figure 2-12 of this EIS and well RS-54 is shown in Figure 2-4 in the Final RCRA Facility Investigation (RFI) Groundwater Work Plan, Portions of Area IV under DOE Responsibility, Santa Susana Field Laboratory, Ventura County, California (CDM Smith 2015a).

93-7 Regarding the request for information on contamination within the vadose zone, the vadose zone is not the source of groundwater contamination. The primary locations with contamination are bedrock fractures and near surface groundwater found in weathered bedrock. As described in response to comment 93-6 of this CRD, DOE has performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS has been updated with information from the draft groundwater remedial investigation report, including the presence of documented contamination associated with some plumes in the vadose zone, a summary of the conceptual site model of three-dimensional groundwater flow and contaminant migration at the site, a reference to the detailed discussion of the site's geology, and additional statements on the impact of fine-grained units on the groundwater flow and contaminant migration. A detailed analysis of the site's geology relevant to the treatment effectiveness was addressed in the *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b). References to documents, primarily the *Draft RCRA Facility Groundwater Remedial Investigation Report* (CDM Smith 2018a), where detailed descriptions of contaminant source areas can be found have been added to this Final EIS. Additional descriptive information on the contaminant plumes has been added to this Final EIS based their nature and extent

Section 3 – Public Comments and DOE Responses

Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager, Region IX, U.S. Environmental Protection Agency

result in the discharge of dredged or fill material into waters of the U.S., demonstrate in the FEIS that the alternative is the LEDPA, describe the potential environmental impacts and discuss alternatives to avoid or minimize those discharges.

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Transportation Impacts and Routes

The calculations and assumptions used to estimate traffic fatality risk associated with the various cleanup alternatives are unclear in the DEIS (pg. S-78, pg. 4-106). For example, under the Cleanup to AOC LUT Values Alternative "Truck option," which would involve 110,000 truck shipments, one traffic fatality is projected; while, under the "Truck/rail option," with 63,000 truck shipments, three traffic fatalities are projected.

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Recommendation: Explain, in the FEIS, how the traffic fatality projections were calculated for each alternative, and identify the regional intermodal facility on a transportation map to better inform the route options.

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Information in the DEIS regarding project truck routes focuses on the main trucking road exiting the SSFL facility, which is Woolsey Canyon Road. Little information is provided on the potential routes beyond Woolsey Canyon Road to the various potential receiving facilities. For each designated waste, multiple waste receiving facility options exist, which allows for flexibility in waste disposal planning for the project. The DEIS is incomplete in its analysis of how the various potential shipment routes could affect air emissions, traffic safety, congestion, road conditions, and noise.

93-10

Recommendations: Provide the following information in the FEIS:

- Provide maps and figures that show the general locations of each category of waste receiving facility in relation to SSFL, and the proposed routes to each facility. Ensure that all reasonably foreseeable traffic analyses, including for each route beyond Woolsey Canyon Road, are considered.
- Consider highlighting on maps and figures all school and hospital locations and other sensitive areas and show how, if possible, impacts in these areas could be minimized by using alternative routes.
- To the extent possible, based on coordination with remediation planning at NASA and Boeing, update the traffic analysis to consider the cumulative impacts.
- Consider a rideshare or carpool program for construction workers as mitigation to further reduce air and traffic impacts.

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While the DEIS considers the impact of truck traffic on schools, it does not address childcare centers, preschools, parks or recreation centers in its evaluation of truck traffic impacts to children.

Recommendations:

- In the FEIS, consider childcare centers, preschools, parks and recreation centers, in addition to schools, in the evaluation of truck traffic and potential exposure to children.
- Consider providing, as mitigation, safety measures such as crossing guards, if busy intersections near schools are not currently staffed.
- Target outreach material about the construction schedule and truck routes to schools, childcare centers and residents.

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provided in the draft groundwater remedial investigation report (CDM Smith 2018a). A revised description of groundwater discharge to surface water (seeps) has been included in Chapter 3, Sections 3.3 and 3.4 of this Final EIS. A figure has been added to this Final EIS to show the current location of known seeps. The modeling of groundwater flow presented in the *Draft RCRA Facility Groundwater Remedial Investigation Report* demonstrates that offsite seeps would not be impacted by contaminants in groundwater beneath Area IV. The *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a) and the *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) are included as references in this Final EIS and are available for review on DOE's website.

Appendix I of the EIS provides the Wetland Assessment, which has further information on the regulatory requirements and results of jurisdictional determination surveys conducted in Area IV and the NBZ. To date no permit applications have been submitted, but DOE has been consulting with the U.S. Army Corps of Engineers to ensure all the necessary permits are submitted and appropriate actions are taken. DOE has met with Corps staff on several occasions to review the wetlands assessment, but the Corps is awaiting receipt of the soil remediation plan to determine permit requirements.

The approach for calculating traffic accidents and fatalities is described in detail in Appendix H, Sections H.7 and H.10, of the EIS, and summarized in Chapter 4, Section 4.8.1. The estimated potential traffic accidents and fatalities are for transport of all radioactive and nonradioactive wastes by truck or truck/rail, and of other materials, such as backfill soil and equipment by truck. The number of truck trips would be the same under either the truck-only option or the truck/rail option. For example, Chapter 4, Table 4-49 shows the number of truck trips under the truck-only and the truck/rail options to be the same. (About 50,000 truck trips were for transporting hazardous and nonhazardous waste from the site and about 43,000 for transporting backfill/materials/supplies to the site.) The differences in accidents and fatality risk between the two options arise from the difference in total miles traveled by truck and total miles traveled by truck and by rail. The truck miles traveled and the accident incidence rates are described in Appendix H, Section H.10. Appendix H was revised to display the rail miles traveled. A label identifying the representative intermodal facility used in the analysis was added to the appropriate transportation figure in Chapter 3, Figure 3-33.

Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.

**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

Preservation of Cultural and Biological Resources

The DEIS acknowledges the broad range of land acreage that could be designated for protection of cultural and/or biological resources. Such designations, which will affect the determination of the soil volumes to be excavated under each alternative, will be contingent upon the U.S. Fish and Wildlife Service's Biological Opinion and the outcome of consultation with the California State Historic Preservation Officer, the Santa Ynez Band of Chumash Indians, and the SSFL Sacred Sites Council (pg. 2-18).

Recommendation: Continue working closely with the approving agencies to update information on the areas to be protected for cultural and biological resources. Provide updated information in the FEIS that discloses the impacts to cultural and biological resources based on proposed soil removal volumes.

Cumulative Impacts

As the Cumulative Impacts chapter mentions, NASA and Boeing are also planning cleanup activities for soil and groundwater at their SSFL sites. The DEIS provides estimated waste volumes and truck trips for the NASA and Boeing cleanups. It is unclear, however, whether the volume estimates for these other cleanup activities are current and whether landfills and other waste receiving facilities will have space available to accept the large volumes of waste from the DOE, NASA and Boeing simultaneously.

Recommendations: To the extent possible, coordinate with NASA and Boeing regarding their remediation projects and provide the following information in the FEIS so that it contains as comprehensive a discussion of cumulative impacts as possible:

- Updated ranges of soil volumes to be disposed, intended schedules, and potential disposal facilities.
- A summary of DOE's discussions with receiving facilities regarding their respective capacities to handle the potential volumes of contaminated soil from DOE, NASA and Boeing. Consider shipment of soils to multiple facilities if this may be necessary.

Greener Cleanup

Greener Cleanup refers to an approach at remediation sites in which EPA seeks to understand the environmental footprint resulting from site activities and identify opportunities to reduce that footprint. EPA has developed Principles for Greener Cleanups,² Best Management Practices (BMPs) for greener cleanups,³ and a Methodology for quantifying the environmental footprint of a cleanup.⁴ Although the State, not EPA, is overseeing cleanup activities at SSFL, each of these resources may be of use for the activities to be undertaken there. Broadly speaking, the resources address the following aspects of a cleanup:

² see http://www.epa.gov/oswer/greenercleanups/pdfs/oswer_greenecleanup_principles.pdf

³ BMPs are listed at <http://www.cfu.in.org/greeneremediation/>

⁴ Methodology for Understanding and Reducing a Project's Environmental Footprint. U.S. EPA, February 2012 (EPA-542-R-12-002)

<http://www.cfu.in.org/greeneremediation/methodology/docs/GC_Footprint_Methodology_Feb2012.pdf> and Overview of EPA's Methodology to Address the Environmental Footprint of Site Cleanup, U.S. EPA, March 2012, EPA-542-F-12-023.

<http://www.cfu.in.org/greeneremediation/methodology/docs/GR_Overview_of_Footprint_Methodology_FS_3-29-12.pdf>

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Chapter 3, Section 3.8.3 provides a discussion of potential disposal sites for both radiological material and hazardous chemicals. This discussion includes maps indicating the primary routes from SSFL to each of the sites. The disposal sites selected for analysis in this Final EIS are intended to be representative for analysis. Potential impacts associated with shipments of material to these sites evaluated includes information on air emissions, traffic safety, congestion, road conditions, noise, socioeconomics, environmental justice, and other potential impacts. Should alternate facilities be selected, DOE would conduct additional NEPA reviews as appropriate.

In Chapter 4, Section 4.14 of this Final EIS, DOE includes an evaluation that focuses on the local transportation routes between SSFL and the major highways (California Route 118 and U.S. Highway 101). This evaluation considered the locations of childcare centers, preschools, parks, and recreation centers. The location of these features along the transportation routes are identified in Chapter 3, Figure 3-29. DOE trucks would be a small part of the overall traffic on these local roads; local traffic loads are presented in Chapter 3, Section 3.8.2. However, DOE identified (Chapter 6 of this EIS) potential mitigation requirements to provide traffic, pedestrian, and bicycle safety and outreach to notify local schools, childcare centers, and residents of the truck routes and schedules.

Cumulative impacts on transportation and traffic were evaluated in Chapter 5, Section 5.5.8, of this Final EIS. Cumulative traffic impacts include estimated vehicle trips by DOE, NASA, and Boeing. Traffic impacts from truck trips would be limited in accordance with the Transportation Agreement between DOE, NASA, and Boeing (Boeing 2015a), that caps the maximum total number of truck shipments from SSFL at 96 per day.

Chapter 4, Section 4.8.2, of the EIS indicates that one site remediation worker per vehicle was assumed for purposes of analysis of traffic impacts, although less worker traffic would occur if workers shared rides during the commute. Carpooling among DOE, NASA, and Boeing workers is identified in Chapter 6, Table 6.1, as a minimization measure

Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. This EIS estimates of soil removal and areas in which the exemption process would be applied are based on data available to develop the EIS and would be refined as remediation plans are developed and implemented. This Final EIS provides updated assessments of impacts based on the Biological Opinion issued by USFWS and the Programmatic Agreement (Chapter 4, Sections 4.5. Biological Resources, and 4.11, Cultural Resources).

**Commenter No. 93 (cont'd): Kathleen Martyn Goforth, Manager,
Region IX, U.S. Environmental Protection Agency**

- Total Energy Use and Renewable Energy Use
- Air Pollutants and Greenhouse Gas Emissions
- Water Use and Impacts to Water Resources
- Materials Management and Waste Reduction
- Land Management and Ecosystems Protection

The DEIS already addresses many aspects of Greener Cleanups. These include estimated greenhouse gas emissions (for demolition and soil removal) and estimated waste generation volumes, as well as measures to be taken for fugitive dust control, stormwater management, and reuse of demolition debris. We offer the Principles, BMPs, and Methodology for use at remediation sites on a voluntary basis, but we also note that these resources may help to identify additional topics for inclusion in the FEIS, depending on the potential significance of the impact [40 CFR 1502.2(b)]. We also note that DTSC's *Advisory for Green Remediation*³ is compatible with EPA's Principles for Greener Cleanups.

Recommendation: Consider EPA and DTSC resources for Greener Cleanups and take advantage of any aspects of these resources that may be beneficial in the cleanup of the SSFL.

Future Land Use

The DEIS references a letter from Boeing stating that it will strive to keep the land as "open" space for recreational use. The DEIS does not explain how land use controls and institutional controls would be implemented to produce such an outcome.

Recommendation: Include further detail in the FEIS about Boeing's commitment and strategy for future land use at SSFL. Identify land use controls and institutional controls that are available for use to keep the site protective of human health and the environment. Compare and contrast background cleanup levels and risk-based cleanup levels with the level of guarantee Boeing can provide on the future land use of the SSFL lands.

2010 AOC

The 2010 AOC requires DOE to perform soil cleanup at the site to meet background levels or laboratory method detection limits per the LUT values, and to use backfill material that also meets these standards. It is unclear in the DEIS how the Revised LUT Values Alternative and the Conservation of Natural Resources Alternative could meet the requirements of the 2010 AOC, or what feasible mechanism exists for DOE to implement either of these alternatives.

Recommendation: Explain in the FEIS the circumstances under which the LUT Values Alternative or the Conservation of Natural Resources Alternative could be pursued, and provide supporting communication and documentation from California DTSC, if available.

³ Interim Advisory for Green Remediation, California Department of Toxic Substances Control, December 2009 <http://www.dtsc.ca.gov/OMP/upload/GRT_Draft_Advisory_20091217_ac1.pdf>

93-16
cont'd

93-17

93-18

- 93-15 The soils volumes and other cumulative impacts information presented in Chapter 5, Table 5-1, of the Draft EIS were up-to-date at the time the Draft EIS was prepared (Draft EIS references NASA 2015 and Boeing 2015b). Since the Draft EIS was released in January 2017, revised information has become available (NASA 2017b, Boeing 2017a, 2017b). Therefore, the NASA and Boeing values in Table 5-1 were updated in this Final EIS to reflect the latest information. Section 5.5.10, Waste Management, of the Draft EIS describes the potential cumulative impacts, based on the capacity of the waste facilities, on disposal facility capacity if all DOE, NASA, and Boeing remediation waste was disposed at a single facility. This section was revised in this Final EIS to reflect the revised waste volumes. Any adverse impacts on a single facility's capacity could be reduced by sending waste to multiple disposal facilities.
- 93-16 DOE is committed to using green cleanup processes to the extent feasible in all aspects of remediation. The green cleanup principles adopted by DOE to guide the development of alternatives for this Final EIS are summarized in a text box in Chapter 2, Section 2.2.2, of this EIS. Chapter 7 provides a more detailed discussion. These principles were developed in consideration of resources, including EPA's Principles for Greener Cleanups (EPA 2009), and DTSC's Interim Advisory for Green Remediation (DTSC 2009).
- 93-17 Since release of the Draft EIS, Boeing entered into a conservation easement and agreement that restricts future use of the property it owns at SSFL to open space (Ventura County 2017a, 2017b). This agreement includes Area IV and the NBZ. This Final EIS was revised to reflect the covenant, its restriction measures, and soil cleanup scenarios consistent with future use as open space (e.g., exposure to a recreational user).
- 93-18 DOE identified action alternatives for soil remediation other than the Cleanup to AOC LUT Values Alternative in response to public comment; because of issues with implementing the technical elements of the 2010 AOC; and to meet NEPA requirements to evaluate a reasonable range of alternatives. Section 6.2 of the AOC identifies the need for DOE to perform an environmental analysis of the AOC. DOE expects that, for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to AOC requirements to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative.

Commenter No. 94: Leslie Aisenman

RE: Comment on SSFL Draft Environmental Impact Statement

None of your proposals are acceptable.
None fulfill your agreement.
Your consent decree has not been met.
It's time to get up. You will not
get away with your betrayal of the
people. Clean up background
Now
Leslie Aisenman

Signed: _____

94-1

94-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC; please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. DOE has included an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or limits based on laboratory capabilities; please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.

Commenter No. 95: Teresa Priem

RE: Comment on SSFL Draft Environmental Impact Statement

Please follow the settlement agreement and clean up to background as you promised. This has gone on for far too long. We need to end this horrible situation, which is causing illness in the area. Thanks.

Signed: Teresa J. Priem

95-1

95-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

95-2

95-2

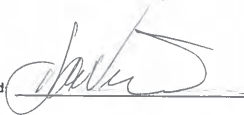
DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of data on offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD to get a better understanding of the current site conditions.

Commenter No. 96: Dan Vicare

RE: Comment on SSFL Draft Environmental Impact Statement

*The DOE must not violate the by looking
at alternatives to following it other than
the baseline Co-mitigation alternative*

Signed



96-1

96-1

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this Final EIS, the U.S. District Court for the Northern District of California (Case No. No. 3:04-CV-04448-SC, May 2, 2007) issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE’s cleanup of Area IV and the NBZ. In accordance with the 2010 AOC, Section 7.11, “Compliance with Applicable Laws and Regulations,” all actions taken pursuant to the order by DOE will be undertaken in accordance with applicable local, State, and Federal laws and regulations. This clause recognizes that DOE must comply with NEPA, as do Sections 6.1 and 6.2 of the AOC. Section 6.1 acknowledges DOE’s obligation to prepare an EIS and ROD pursuant to a court order. Section 6.2 recognizes the need to complete an environmental review that meets the requirements of the court order. This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC, using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. (Please see Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for more information.) In response to public input received and consistent with its obligations under NEPA, DOE also analyzes two soil remediation action alternatives that are based on risk to human health as well as the protection of natural and cultural resources. This latter use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions at used by DOE at sites throughout the country, by DTSC at DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

Commenter No. 97: Anonymous

RE: Comment on SSFL Draft Environmental Impact Statement

YOU ARE NOT HOLDING UP YOUR AGREEMENT TO CLEAN UP TO BACKGROUND. WE WILL NOT ALLOW YOU TO RENEGE ON YOUR PROMISE. WE WILL RESIST AND REJECT ANYTHING LESS THAN WHAT YOU PROMISED.

THE LIVES OF THE COMMUNITY ARE DEPENDENT ON COMPLIANCE TO OUR ENVIRONMENTAL NEEDS

CLEAN UP THE BACKGROUND

Signed: _____

97-1

97-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup" of this CRD for additional information, including necessary steps before DOE makes a decision.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD), as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 98: Megan Bendaïd

RE: Comment on SSFL Draft Environmental Impact Statement

LAST CHANCE
COURT COMES NEXT.
YOU SIGNED AGREEMENT
TO AGREE TO CLEAN UP &
DO IT.
Signed: *Megan Bendaïd*

98-1

98-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 99: D. Chapman

RE: Comment on SSFL Draft Environmental Impact Statement

Santa Susana must be cleaned up to a point of non-contaminated. People and wild life must be top priority - Take responsibility. Clean up your mess. The company had made a lot of money. No excuses about cost!

Signed: 

99-1

99-1

DOE acknowledges your preference for cleanup of the SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Note that there are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of that work. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

99-2

99-2

The cleanup of SSFL Area IV and the NBZ is being performed by DOE. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. DOE performed a cost-benefit analysis of the soil remediation alternatives as part of this EIS (see Appendix K). The results of the analysis show that the cleanup under the Cleanup to 2010 AOC LUT Values Alternative would be much more expensive and with minimal additional protection of public health and the environment compared to the other project soil remediation alternatives.

Commenter No. 100: John Casselberry

RE: Comment on SSFL Draft Environmental Impact Statement

The agreement must be followed and cleaned-up to background levels. Anything less is unacceptable. The truck volumes are over-inflated. This problem has been going on for long enough. There must be no alternative to full clean-up.

John Casselberry, Jr.
Simi Valley

Signed: John Casselberry Jr.

100-1

100-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions at by DOE at sites throughout the US, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites.

Also, refer to Sections 2.4 "Suitable Backfill Soil" and 2.9 "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the amount of material to be removed from the SSFL site and its transportation offsite. The truck volumes are based on estimates of the quantities of material exceeding the acceptance criteria for each alternative and the corresponding estimates of the volumes of soil required to replace soil removed during remediation. As stated in Section 2.3 of this Final EIS, DOE analyzed over 11,000 soil samples to determine the volume of material that exceeds AOC LUT values.

Commenter No. 101: Judy Mayer

RE: Comment on SSFL Draft Environmental Impact Statement

3/15/17

Dear Ms. Jennings,

None of the proposed alternatives to the cleanup of the Santa Susana Field Lab are to the standards that DOE committed to in the Agreement on Consent (AOC)

The agreement is a debt that the United States owes to the people of California. The United States can't question its debts.

Signed: Judy Mayer
 Semi Valley, CA

101-1

101-1

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD), as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE throughout the US, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 102: Phyllis Palakow

RE: Comment on SSFL Draft Environmental Impact Statement

*your proposals do not satisfy
your agreement. Clean it up
completely.*

Signed: _____

Phyllis Palakow

102-1

102-1

Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities.

Commenter No. 103: Jodie Cooper

RE: Comment on SSFL Draft Environmental Impact Statement

DOE must not violate the agreement made,
by looking at alternatives to following it.

The agreement is a debt that the US owes
the people of California, Simi Valley,
and the U.S. cannot question its debts.

Signed: Jodie Cooper

103-1

103-1

DOE acknowledges your concern about complete cleanup of SSFL this is consistent with the 2010 AOC. With respect to the alternatives evaluated in the EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. As discussed in Chapter 2, Section 2.1 of this Final EIS, the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. These two alternatives would reduce (1) risk to the public and the environment and (2) potential impacts to visual, biological, cultural, and water resources compared to the Cleanup to AOC Look-Up Table Values Alternative. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. DOE acknowledges that implementation of any alternative would have to be approved by the DTSC. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this Ardor a discussion of soil remediation alternatives.)

Commenter No. 104: Marie Ammerman

RE: Comment on SSFL Draft Environmental Impact Statement

It is unbelievable and unforgivable that DOE has not followed the AOC already. People are still at risk of serious illness and death, and anything short of a full cleanup to background will not stop that. The citizens of Simi Valley and all districts that surround the Santa Susana Field Lab deserve to have an environment free from toxic chemicals and life-threatening radiation. This cleanup is a debt owed to the people of this area and of California. The objections to a full cleanup to background voiced by the DOE are nothing compared to the anguish of ~~parents~~ families losing loved ones to cancer or watching children struggle with birth defects, all due to poisoning from the SSFL. Get creative, find alternative truck routes, come up with other methods, but GET IT CLEANED UP TO BACKGROUND!

Signed: Marie P

104-1

104-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

104-2

104-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD with regard to your preference for a full cleanup to background levels. Also refer to Section 2.7, "Offsite Impacts," of this CRD regarding information on contaminants from SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

104-1
cont'd

104-2
cont'd

104-3

104-1
cont'd

104-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.

Commenter No. 105: Kathleen Smith

RE: Comment on SSFL Draft Environmental Impact Statement

None of the proposed alternative cleanup SFL is the standard that DOE committed to in the Agreement on Consent.

DOE must not violate the agreement by looking at alternatives of following it

The agreement is a debt that the United States owes to the people of California, and the US cannot question its debt!

DOE should consider various alternatives for how to follow the AOC, including alternatives to using trucks, using alternate roads, and isolating the most contaminated soil to reduce the amount of soil that must be removed.

We request a cleanup to background.

Signed: Kathleen Smith

105-1

105-1 As stated in Chapter 2, Section 2.2.1 of this Final EIS, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

105-2

105-2 DOE has considered alternative methods of how to implement the 2010 AOC. As described in Chapter 2 and shown in Figure 2-1, soil over a large part of Area IV contains chemicals and/or radionuclides that exceed 2010 AOC LUT values. The only feasible way of cleaning up those soils to comply with the AOC LUT values is to remove it using earth moving equipment. Other alternatives or methods of removing or cleaning the soil that DOE considered but dismissed from detailed evaluation are discussed in Chapter 2, Section 2.2.3, of this EIS. These include alternatives such as soil partitioning and soil washing or using large volumes of water to flush contaminated sediments to the bottoms of drainage channels where they would be recovered. As discussed in Section 2.2.3, it is uncertain whether these alternatives would be able to meet the AOC LUT values and therefore be feasible.

As noted in Chapter 2, Section 2.3.3.1 of this Final EIS, DOE identified technical issues with implementing the 2010 AOC with the current LUT values. To address this, DOE developed alternatives that determine cleanup levels by considering risk to human health and the protection of natural resources. The use of a risk assessment to determine soil cleanup is consistent with that used for cleanup actions at other DOE

Commenter No. 105 (cont'd): Kathleen Smith

sites, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Refer to Chapter 2, Sections 2.3 and 2.4 of this Final EIS for descriptions of the soil remediation alternatives and the corresponding soil volumes that would be removed. DOE did consider four different routes for the trucks in the analysis (see Chapter 4, Section 4.8.2, of this Final EIS). DOE also considered alternative means of removing waste from SSFL. See Section 2.9, "Options for Transportation of Waste from SSFL" of this CRD regarding the use of other methods and routes for transporting waste and soil from the site. A discussion of other transportation concepts considered but dismissed from detailed analysis is included in Chapter 2, Section 2.2.3 of this Final EIS.

Commenter No. 106: C. Cole

RE: Comment on SSFL Draft Environmental Impact Statement

DOE must NOT violate the agreement on consent by looking at alternatives to following it.

We want clean-up to BACKGROUND

The agreement is a debt that the United States owes to the people of California and to question that debt is unconstitutional!

My daughters deserve to grow up in a healthy environment

Signed: C. Cole

106-1

106-1 In this EIS, DOE does not propose violating the 2010 AOC signed with its regulator, DTSC. As stated in Chapter 2, Section 2.2.1 of this Final EIS, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

106-2

106-2 DOE acknowledges your concern about cleanup to background. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

106-1 cont'd

106-3

106-3 DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities.

Commenter No. 107: Kathryn Nezhni

RE: Comment on SSFL Draft Environmental Impact Statement

This site is Superfund, Cleable & needs to be managed as such, DOB should consider various alternatives for how to follow the AOC, including alternatives to using trucks, using alternate routes & isolating the most contaminated soil to reduce the amount of soil that must be removed. A settlement agreement was signed previously & it must be implemented. There is a higher incidence of cancer w/I 2 miles of Santa Susana Field Laboratories

Signed: *Kathryn Nezhni*

107-1

107-2

107-3

107-4

107-1 As discussed in Chapter 1, Section 1.3 of the EIS, the EPA conducted a preliminary assessment/site inspection of the Energy Technology Engineering Center starting in 1989 to assess potential chemical and radiological threats to human health and the environment in an effort to determine whether further action under the CERCLA was warranted. The results of the assessment and inspection led EPA to conclude that referral to the National Priorities List, also known as the Superfund List, was not necessary (EPA 2003). EPA re-evaluated the entire SSFL site (rather than just Area IV) and, in December 2007 and released the results of a Hazard Ranking Survey performed at SSFL. Based on the evaluation, EPA recommended further assessment of all areas of SSFL under CERCLA, particularly regarding the presence of trichloroethylene (TCE) in groundwater in Areas I and II (EPA 2007a). The score exceeded the threshold for listing SSFL on the National Priorities List for cleanup under CERCLA (EPA 2007b). In January 2009, the State of California decided it would not support listing SSFL on the National Priorities List (California EPA 2009). EPA decided not to list SSFL on the National Priorities List (EPA 2003) and DTSC continued in its role as lead regulatory agency at the SSFL site.

107-2 DOE has considered alternative methods of how to implement the 2010 AOC. As described in Chapter 2 and shown in Figure 2-1, soil over a large part of Area IV contains chemicals and/or radionuclides that exceed 2010 AOC LUT values. The only feasible way of cleaning up those soils to comply with the AOC LUT values is to remove it using earth moving equipment. Other alternatives or methods of removing or cleaning the soil that DOE considered but dismissed from detailed evaluation are discussed in Chapter 2, Section 2.2.3, of this EIS. These include alternatives such as soil partitioning and soil washing or using large volumes of water to flush contaminated sediments to the bottoms of drainage channels where they would be recovered. As discussed in Section 2.2.3, these alternatives were determined to be ineffective or impractical.

As noted in Section 2.3 of this Final EIS, DOE identified technical issues with implementing the 2010 AOC with the current LUT values. To address this, DOE developed the Cleanup to Revised LUT Values Alternative that uses chemical risk-based screening levels as cleanup criteria. Development and adoption of revised cleanup levels as suggested by this alternative is a means by which the AOC could be made to be more implementable.

DOE did consider four different routes for the trucks in the analysis (see Chapter 4, Section 4.8.2, of this Final EIS). DOE also considered alternative means of removing waste from SSFL. See Section 2.9, "Options for Transportation of Waste from SSFL"

Commenter No. 107 (cont'd): Kathryn Nezhni

of this CRD regarding the use of other methods and routes for transporting waste and soil from the site. A discussion of other transportation concepts considered but dismissed from detailed analysis is included in Chapter 2, Section 2.2.3 of this Final EIS.

Two of the soil remediation alternatives DOE evaluated reduce the amount of soil that must be removed from SSFL. These alternatives focus on identifying and removing the most contaminated soil. Under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, only low concentrations of chemicals and/or radionuclides would remain. Refer to Chapter 2, Sections 2.3 and 2.4 of this Final EIS for descriptions of the soil remediation alternatives and the corresponding soil volumes that would be removed.

- 107-3** DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.
- 107-4** DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD which discusses the study that evaluated cancer incidence by distance from SSFL. The discussion notes the limitations of the study expressed by the authors, as well as by subsequent reviews. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 108: Lloyd Dent

RE: Comment on SSFL Draft Environmental Impact Statement

I am a 50-year resident of the San Fernando Valley and am battling 2 kinds of cancer of unexplained causes.

The Santa Susana field must be cleaned up to background levels for all of us long time residents and newcomers an especially the children

Signed: 

108-1

108-1

DOE acknowledges your concern about cleanup of SSFL to background levels. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 109: Doris Dent

RE: Comment on SSFL Draft Environmental Impact Statement

*This must end! Clean up
 Santa Susana Field Lab to
 full background now. I'm
 a long time San Fernando valley
 resident and am furious that
 nothing continues to be done - decade after
 decade. Clean it up now!* Signed: Doris Dent

109-1

109-1

DOE acknowledges your concern about cleanup of SSFL to full background levels. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. Additionally, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 110: Jan Rapoport

RE: Comment on SSFL Draft Environmental Impact Statement

*Your proposals do not satisfy your agreement.
Clean it up completely.
To many people have died. What if
it was your child that died.*

Signed:

Jan Rapoport

110-1

110-1 DOE acknowledges your preference for a complete cleanup. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including a discussion of how the Cleanup to AOC LUT Values Alternative meets the 2010 AOC.

110-2

110-2 Thank you for your comment. It has been included in the Administrative Record for this EIS. Please see Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL” of this CRD for further discussions of these issues. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 111: Shanna Ingalsbee

RE: Comment on SSFL Draft Environmental Impact Statement

To Whom It May Concern,
Please follow the settlement agreement
and ~~clear~~ clean up the background
as you promised
This must lead now!

Signed: Shanna Ingalsbee

111-1

111-1 DOE acknowledges your preference for cleanup to background. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 112: David Lutnoss

RE: Comment on SSFL Draft Environmental Impact Statement

Do the Deal that was signed in
the consent agreement in 2010.

Motion to Compel

Signed: David Lutnoss

112-1

112-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 113: Clare Deffense

RE: Comment on SSFL Draft Environmental Impact Statement

Your proposals do not follow the agreement. Start over!

113-1

113-1 Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for information regarding the soil remediation alternatives, including how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

CLARE DEFFENSE

Signed: 

Commenter No. 114: Greg Avila

RE: Comment on SSFL Draft Environmental Impact Statement

Clean it up... Today - Today.

|| 114-1

Signed: 

114-1

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. Additionally, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DOE would begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 115: Mary Platt

RE: Comment on SSFL Draft Environmental Impact Statement

None of the ^{proposed} alternatives clean up SSFL to the standards that DOE committed to in the Agreement on Consent (AOC). DOE must not violate the agreement by looking at alternatives to following it (other than the baseline do-nothing alternative). The agreement is a debt that the United States owes to the people of California and the United States cannot question its debt. DOE should consider various alternatives for how to follow the AOC, including alternatives to using trucks, using alternate routes, and isolating the most contaminated soil to reduce the amount of soil that must be removed.

Signed: Mary R. Platt

115-1

115-1

In this EIS, DOE does not propose violating the 2010 AOC signed with its regulator, DTSC. As stated in Chapter 2, Section 2.2.1 of this Final EIS, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

115-2

115-2

DOE has considered alternative methods of how to implement the 2010 AOC. As described in Chapter 2 and shown in Figure 2-1, of this Final EIS, soil over a large part of Area IV contains chemicals and/or radionuclides that exceed 2010 AOC LUT values. The only feasible way of cleaning up those soils to comply with the AOC LUT values is to remove it using earth moving equipment. Other alternatives or methods of removing or cleaning the soil that DOE considered but dismissed from detailed evaluation are discussed in Chapter 2, Section 2.2.3, of this EIS. These include such alternatives as soil partitioning and soil washing or using large volumes of water to flush contaminated sediments to the bottoms of drainage channels where they would be recovered. As discussed in Chapter 2, Section 2.2.3, of this Final EIS, these alternatives were determined to be ineffective or impractical.

As noted in Section 2.3.3.1 of this EIS, DOE identified technical issues with implementing the 2010 AOC with the current LUT values. To address this, DOE developed the Cleanup to Revised LUT Values Alternative that uses chemical risk-based screening levels as cleanup criteria. Development and adoption of revised cleanup levels

Commenter No. 115 (cont'd): Mary Platt

as suggested by this alternative is a means by which the AOC could be made to be more implementable.

DOE did consider four different routes for the trucks in the analysis (see Chapter 4, Section 4.8.2, of this Final EIS). DOE also considered alternative means of removing waste from SSFL. See Section 2.9, "Options for Transportation of Waste from SSFL" of this CRD regarding the use of other methods and routes for transporting waste and soil from the site. A discussion of other transportation concepts considered but dismissed from detailed analysis is included in Chapter 2, Section 2.2.3 of this Final EIS.

Two of the soil remediation alternatives DOE evaluated reduce the amount of soil that must be removed from SSFL. These alternatives focus on identifying and removing the most contaminated soil. Under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, only low concentrations of chemicals and/or radionuclides would remain. Refer to Chapter 2, Sections 2.3 and 2.4, of this Final EIS for descriptions of the soil remediation alternatives and the corresponding soil volumes that would be removed.

Commenter No. 116: Rosa Echaveste

RE: Comment on SSFL Draft Environmental Impact Statement

Please do what should be
done regarding this environment!
Do the right thing for us
and future Generations!

Signed: _____



116-1

116-1

DOE prepared this Final EIS to address the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. It evaluates separate sets of alternatives for the three components of the cleanup project: soil remediation, building demolition, and groundwater remediation. Please refer to Sections 2.1, "Preferences for Cleanup," and 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for further discussion. Also, refer to Chapter 2 of this Final EIS for a description of the alternatives evaluated and a summary of the potential environmental impacts. All of the action alternatives evaluated in this EIS would be protective of human health and the environment.

Commenter No. 117: Nanette Duff Sullivan

RE: Comment on SSFL Draft Environmental Impact Statement

Your proposals do not meet the conditions of your agreement.

Clean up Santa Susana Field Laboratories as per your contract!

A friend's grandmother living in the area died of brain cancer.

Signed: 

117-1

117-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

117-2

117-2 Thank you for your comment. It has been included in the Administrative Record for this EIS. Please see Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL" of this CRD for further discussions of these issues. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 118: Melissa Demyan

RE: Comment on SSFL Draft Environmental Impact Statement

NONE OF THE PROPOSED ALTERNATIVES CLEAN UP SSFL TO THE STANDARDS THAT DOE COMMITTED TO IN THE AOC. THE AGREEMENT IS A DEBT THAT THE US OWES THE PEOPLE OF CALIFORNIA - SPECIFICALLY RESIDENTS OF THE VALLEY, SIMI RANCH PARK - THE USA CANNOT QUESTION ITS DEBTS!

DOE NEEDS TO CONSIDER ALTERNATIVES FOR HOW TO FOLLOW THE AOC INCLUDING ALTERNATIVES TO TRUCKS & ALTERNATIVE ROUTS. A CONVEYER BELT IS WIDELY SUPPORTED BY SIMI RESIDENTS.

LEAVING THIS SUPERFUND ELIGIBLE SITE AS A TOXIC & RADIOACTIVE HAZARD IS UNACCEPTABLE. RESIDENTS HERE - MYSELF INCLUDED - ALL KNOW SOMEONE WITH A RARE CANCER. YOUR 'E-KILLING US! CLEAN UP YOUR SHIT.

Signed: *Melissa Demyan*

118-1

118-1 Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

118-2

118-2 DOE has considered alternative methods of how to implement the 2010 AOC. As described in Chapter 2 and shown in Figure 2-1 of this Final EIS, soil over a large part of Area IV contains chemicals and/or radionuclides that exceed 2010 AOC LUT values. The only feasible way of cleaning up those soils to comply with the AOC LUT values is to remove it using earth moving equipment. Other alternatives or methods of removing or cleaning the soil that DOE considered but dismissed from detailed evaluation are discussed in Chapter 2, Section 2.2.3 of this Final EIS. These include alternatives such as soil partitioning and soil washing or using large volumes of water to flush contaminated sediments to the bottoms of drainage channels where they would be recovered. As discussed in Section 2.2.3, these alternatives were determined to be ineffective or impractical.

118-1 cont'd

118-3

As noted in Section 2.3.3.1 of this Final EIS, DOE identified technical issues with implementing the 2010 AOC with the current LUT values. To address this, DOE developed the Cleanup to Revised LUT Values Alternative that uses chemical risk-based screening levels as cleanup criteria. Development and adoption of revised cleanup levels as suggested by this alternative is a means by which the AOC could be made to be more implementable.

DOE did consider four different routes for the trucks in the analysis. (Please see Chapter 4, Section 4.8.2, of this Final EIS.) DOE also considered alternative means of removing waste from SSFL. See Section 2.9, "Options for Transportation of Waste from SSFL" of this CRD regarding the use of other methods and routes for transporting waste and soil from the site. A discussion of other transportation concepts considered but dismissed from detailed analysis is included in Chapter 2, Section 2.2.3 of this Final EIS.

Commenter No. 118 (cont'd): Melissa Demyan

Two of the soil remediation alternatives DOE evaluated reduce the amount of soil that must be removed from SSFL. These alternatives focus on identifying and removing the most contaminated soil. Under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, only low concentrations of chemicals and/or radionuclides would remain. Refer to Chapter 2, Sections 2.3 and 2.4 of this Final EIS for descriptions of the soil remediation alternatives and the corresponding soil volumes that would be removed.

118-3 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE’s purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 119: Barbara Miyamoto

RE: Comment on SSFL Draft Environmental Impact Statement

Please protect the planet for my grandchildren
We must work for clean water & clean air. No more
pollution!

Signed: Barbara Miyamoto

119-1

119-1

Thank you for your comment. The cleanup alternatives evaluated in this EIS would be required to comply with applicable regulations for pollutant discharges to water and air. See Chapter 8 of this EIS for a description of applicable laws, regulations, and other requirements.

Commenter No. 120: A. Lysa Simon

RE: Comment on SSFL Draft Environmental Impact Statement

Please ^{require} clean-up to background,
None of the proposals so far do
not satisfy the agreement.

My brother as a young man used
to walk into Santa Susana Mountain.
He died at 30 from cancer. We can
not afford less than clean us to
background.

Signed:

A. Lysa Simon

120-1

120-2

120-1
cont'd

120-1 DOE acknowledges your preference for cleanup to background. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

120-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 121: Victor Cherdhuriya

RE: Comment on SSFL Draft Environmental Impact Statement

Dear Ms. Stephanie Jennings,

Please support the Santa Susana Field Lab clean-up. None of the proposed alternatives cleanup SSFL meets the standards that DOE committed to in the Agreement of Consent. DOE must not violate the agreement. The agreement is a debt that the U.S. owes to the people of California. DOE should consider various alternatives for how to fulfill the Agreement on Consent, including alternatives to using trucks & alternative routes.

Signed: Victor Cherdhuriya

121-1

121-2

121-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities.

121-2 DOE has considered alternative methods of how to implement the 2010 AOC. As described in Chapter 2 and shown in Figure 2-1 of this Final EIS, soil over a large part of Area IV contains chemicals and/or radionuclides that exceed 2010 AOC LUT values. The only feasible way of cleaning up those soils to comply with the AOC LUT values is to remove it using earth moving equipment. Other alternatives or methods of removing or cleaning the soil that DOE considered but dismissed from detailed evaluation are discussed in Chapter 2, Section 2.2.3, of this EIS. These include alternatives such as soil partitioning and soil washing or using large volumes of water to flush contaminated sediments to the bottoms of drainage channels where they would be recovered. As discussed in Chapter 2, Section 2.2.3, these alternatives were determined to be ineffective or impractical.

As noted in Section 2.3.3.1 of this Final EIS, DOE identified technical issues with implementing the 2010 AOC with the current LUT values. To address this, DOE developed the Cleanup to Revised LUT Values Alternative that uses chemical risk-based screening levels as cleanup criteria. Development and adoption of revised cleanup levels as suggested by this alternative is a means by which the AOC could be made to be more implementable.

DOE did consider four different routes for the trucks in the analysis (see Chapter 4, Section 4.8.2, of this Final EIS). DOE also considered alternative means of removing waste from SSFL. See Section 2.9, "Options for Transportation of Waste from SSFL" of this CRD regarding the use of other methods and routes for transporting waste and soil from the site. A discussion of other transportation concepts considered but dismissed from detailed analysis is included in Chapter 2, Section 2.2.3, of this Final EIS.

Two of the soil remediation alternatives DOE evaluated reduce the amount of soil that must be removed from SSFL. These alternatives focus on identifying and removing the most contaminated soil. Under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, only low concentrations of chemicals and/or radionuclides would remain. Refer to Chapter 2, Sections 2.3 and 2.4 for descriptions of the soil remediation alternatives and the corresponding soil volumes that would be removed.

Commenter No. 122: Taylor Altenbern

Taylor Altenbern

10th April 2017

Ms. Stephe Jennings

NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

The state of contamination in which the Santa Susana Field Laboratory stands remains a great danger to that of neighboring ecosystems and communities. As someone who values the preservation of the environment, as well as the health and livelihood of all peoples, it is of great concern to me that the cleanup proposals presented by the DOE be adjusted to ensure that the incredibly toxic chemicals and cancerous radionuclides are cleaned up adequately.

The four individual cleanup plans that the DOE is proposing would neglect anywhere from 39% to 100% of the contamination, leaving communities and ecosystems at extreme risk. Of all the four alternative four cleanup plans proposed, not one of them complies with the agreement signed between DOE and DTSC in 2010. The DOE is the polluter, and therefore should by no means have the authority to regulate the amount of their own waste that they are required to clean up. The power that the DOE is attempting to withhold is crime and abuse against those who have been at risk due to their previous negligence.

The DOE's reliance on using "natural attenuation" – the naturally occurring deterioration of radiation over time – as a solution to the contamination is unacceptable. The minimum time for the radiation to deteriorate would take *at least* seventy years, dismissing the urgency of the issue and allowing the contamination to continue to leak off site and deplete the health of ecosystems and communities. The cleanup has already been delayed for over half a century, and therefore it is necessary for the contamination to be removed in a time sensitive manner. Therefore, the DOE's proposed cleanups in the EIS should reflect the urgency and necessity of the contamination at the SSFL in order to ensure the health and safety of the communities and ecosystems surrounding it.

Regards,

Taylor Altenbern

122-1

122-2

122-3

122-4

122-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

122-2 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. DOE acknowledges your concern about complete cleanup of SSFL consistent with the 2010 AOC. With respect to the alternatives evaluated in the EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. As discussed in Chapter 2, Section 2.1 of this Final EIS, the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. These two alternatives would reduce (1) risk to the public and the environment and (2) potential impacts to visual, biological, cultural, and water resources compared to the Cleanup to AOC Look-Up Table Values Alternative. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. DOE acknowledges that implementation of any alternative would have to be approved by the DTSC.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under the CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DOE will begin cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS Record of Decision and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

122-3 As described in Chapter 2, Section 2.6.2 of this Final EIS, tritium has a half-life of 12.5 years and the area of groundwater impacted by tritium is within one half-life (12.5 years) of meeting the drinking water standard, not the 70 years indicated

Commenter No. 122 (cont'd): Taylor Altenbern

by the commenter. On the other hand, DOE in the Draft EIS considered more active remediation measures, such as removing bedrock, for the location with the strontium-90 impacted bedrock (strontium-90 has a 29 year half-life). The locations with groundwater impacted by tritium and strontium are small, are within the site boundaries, and do not threaten off-site water supplies. At the time the Draft EIS was prepared, DOE had no preferred alternatives for cleanup. As described in Chapter 2, Section 2.7 of this Final EIS, DOE's preferred alternative for groundwater remediation is a combination of the Monitored Natural Attenuation Alternative and the Treatment Alternative. Under this alternative, monitored natural attenuation would be used for the two plumes with the lowest concentrations of TCE (Metals Clarifier plume and the RMHF plume) and for the tritium plume. Treatment of the remaining plumes will be in accordance with the results of the Corrective Measures Study. Source removal is the preferred alternative for the strontium-90 source. The selected clean-up remedies will be identified in the ROD(s).

Regarding the commenters concerns about offsite impacts, please see Section 2.7, "Offsite Impacts" of this CRD for a discussion and DOE's response.

- 122-4 DOE acknowledges your concern regarding removal of contamination in a time-sensitive manner and refers you to Section 2.1, "Preferences for Cleanup," of this CRD. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the alternatives presented in this EIS are intended to address remediation of Area IV and the NBZ in a timely manner. Following completion of the regulatory actions identified in the response to comment 122-2, DOE's first action is expected to be removal of the 18 buildings in Area IV for which it is responsible. Soil remediation would follow building removal and continue until it was completed. Groundwater remediation would occur in parallel with building and soil remediation.

Commenter No. 123: Tyan Schreck

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

I am very concerned about the impacts that the contaminants located at the Santa Susana Field Laboratory will have on the environment and the physical health of the surrounding communities. If the Department of Energy is not willing to clean up to the standards that they promised in 2010, then the community and the environment will pay for their failure to do so.

The Department of Energy signed an Administrative Order on Consent in 2010 that stated that they would clean up 100% of the toxic waste that they created. The DOE later released an Environmental Impact Study that proposes to leave 39%, 91%, 99%, or 100% of the area contaminated in its four cleanup options, respectively. Every single one of these four proposed cleanups breaks the agreement that DOE made in 2010. The DOE's DEIS does not acknowledge the AOC as a legally-binding contract that they cannot break unilaterally. Because the DOE was the polluter they are not able to decide how much they need to clean up. That decision belongs to the Department of Toxic Substance Control, even if there wasn't a pre-agreed upon AOC. Also, the AOC gives the DTSC authority to determine the remediation goals for radionuclide contamination, not the DOE. With these proposed EIS's, not only is the DOE violating their own cleanup guidelines but they are also violating the guidelines created by the DTSC.

DOE believes that by cleaning up the extremely hazardous waste that they have created will cause more unnecessary harm to the environment. They also claim that by leaving the area contaminated will cause little to no harm at all to the surrounding community. These claims and beliefs could not be more false. All of the contamination poses and extreme risk to public and environmental health in every one of the DOE's proposed cleanup options. Though immediate effects may not be evident, long-term, latent effects will plague the area for decades if not centuries to come. It is ironic that the DOE is so unwilling to harm the environment now, but not when they were polluting and damaging it to begin with.

I ask that the DOE rethinks their EIS and follows the guidelines that they created in 2010 within the AOC. If they do not follow the 2010 AOC public health and the environment will be at risk for a vast amount of time. I am worried that if the DOE is not held responsible for their actions then what organization or company will be in the future?

Sincerely,
Tyan Schreck

123-1

123-2

123-1
cont'd

123-2
cont'd

123-3

- 123-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.
- 123-2 DOE acknowledges your concern about complete cleanup of SSFL consistent with the 2010 AOC. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. With respect to the alternatives evaluated in the EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. As discussed in Chapter 2, Section 2.1 of this Final EIS, the project would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. These two alternatives would reduce (1) risk to the public and the environment and (2) potential impacts to visual, biological, cultural, and water resources compared to the Cleanup to AOC Look-Up Table Values Alternative. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. DOE acknowledges that implementation of any alternative would have to be approved by the DTSC.
- As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (program EIR) under CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DOE will begin cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS Record of Decision and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.
- 123-3 DOE has taken responsibility for the cleanup of Area IV and the NBZ. DTSC has the authority to verify that future cleanup would be sufficient and to require additional cleanup by DOE if needed to meet the negotiated cleanup standards.

Commenter No. 124: Daniel Delin

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

I am very concerned about the current situation plaguing the Santa Susana Field Laboratory site in which the DOE is refusing to clean up the contaminants that they legally agreed to. The DOE needs to be held responsible in order to protect the surrounding communities and environment.

In 2010 , the DOE signed the AOC in which they agreed to cleanup all soil contaminants above background levels at the Santa Susana Field Lab by 2017. DOE has gone back on this agreement in their Draft EIS in which they propose four alternatives which leaves either 39%, 91%, 99%, or 100% of the contamination at the site. If any of these four alternatives are approved, DOE are violating their legally-binding commitment they signed with the DTSC. As the polluters, DOE has no grounds to determine what percent can be left behind and should look to the DTSC as deciding authority. Agreeing to any of the alternatives is allowing dangerous radionuclides and toxic chemicals to remain on the site and continue to degrade the region. Despite claiming that their alternatives are protective of human health and the environment, the second proposal manipulates the standards to be up to 1,000 times less protective of human health than the current EPA standard. The third proposal leaves an amount of chemicals behind that would equivalent to getting an extra chest x ray every month of your life. Any of these options, especially on top of the chemicals already ingested by the residents, is unacceptable.

In the DEIS, DOE attempts to create doubt that the AOC is attainable. They claim that it is too difficult to find backfill soil, yet "Gillbrand" fits all but two AOC requirements, are not a hazard to human health or the environment. They also reference leaving contamination by claiming they would be exempt from redressing certain areas on the grounds of "protecting" sensitive biological or cultural resources. They fail to mention that the AOC requires the Biological Opinion from the U.S. Fish and Wildlife Service and provide no documentation of one being issued.

The DOE needs to comply with the 2010 AOC to prevent further degradation to human health and the environment. The alternatives proposed do not meet the legally-binding agreement signed by the DOE and put the whole region at continued risk to the toxic chemicals.

Sincerely,
Daniel Delin

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124-1 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DOE will begin cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS Record of Decision and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

124-2 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The exclusion of the indirect garden pathway is consistent with the future open space use of the site.

Commenter No. 124 (cont'd): Daniel Delin

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway for the Onsite Suburban Resident. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

- 124-3** The 2010 AOC does not allow consideration of risk and requires all chemicals and radionuclides in backfill soil to be below their respective LUT values in order for the soil to be used in Area IV. DOE notes that it violates the 2010 AOC to determine that a backfill source is "close enough." As stated in the AOC, all chemicals above the LUT values are exceedances and should be remediated. Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source.
- 124-4** Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. At the time the Draft EIS was issued, DOE had been involved in ongoing meetings

Commenter No. 124 (cont'd): Daniel Delin

with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this Final EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on applying the exemption process to soil cleanup locations in Area IV and the NBZ. Overall, the Final EIS identifies 54 acres that would be treated through monitored natural attenuation (many of which otherwise would have been subject to the exemption process) and an additional 77 acres in Area IV and the NBZ in which the exemption process would be applied. Of this area, the Final EIS identifies 4 acres in which active cleanup measures would be used for the protection of biological and cultural resources. See Appendix D of this EIS for a discussion of the soil remediation volumes and area affected.

Commenter No. 125: Janet L. Whitlock,
Regional Environmental Officer, U.S. Department of the Interior



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
333 Bush Street, Suite 515
San Francisco, California, 94104

IN REPLY REFER TO:
(ER 170035)

Filed Electronically

April 13, 2017

Subject: DEIS DOE Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory, CA

Ms. Stephe Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings;

The Department of the Interior has received and reviewed the subject document and has no comments.

Thank you for the opportunity to review this project.

Sincerely,

Janet L. Whitlock
Regional Environmental Officer

Cc: OEPC Staff Contact: Lisa_Treichel@ios.doi.gov

|| 125-1

125-1 DOE acknowledges the U.S. Department of the Interior review.

Commenter No. 126: Brad Visacki

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Dear Ms. Stephe Jennings,

I am concerned about the Draft Environmental Impact Statement (DEIS) the Department of Energy released for the Santa Susana Field Laboratory (SSFL), and how it will affect the environment and surrounding communities. Unless the DOE is held responsible and made to follow through with their contract with the 2010 AOC, agreeing to a full clean-up of the Santa Susana Field Lab, the community will continue to suffer from environmental consequences.

In regards to the notion that the DOE could avoid remediation due to cultural exemption, the DOE cites in the DRAFT EIS Appendix F page 16, that there are 12 archaeological resources within the Region of Influence (Area IV and the NBZ) that are proposed as culturally exempt, however the National Register of Historic Places (NRHP) has not yet evaluated any of them. I believe that until this is the case, cultural resources should not be considered as part of the DEIS for possible remediation exemptions. In the Draft SSFL Area IV EIS - References for Appendix F Hyperlink 502, the W&S Consultants state in 2001 that the

... sites were recommended as ineligible for listing in the National Register of Historic Places. However, because formal concurrence of ineligibility has not been sought from nor been given by the State Historic Preservation Officer at the California Office of Historic Preservation, in accordance with Title 36, Code of Federal Regulations, Part 800, the four sites are treated as eligible for inclusion in the NRHP until determined otherwise.

This reference, although listed as a link on the DOE's Environmental impact statement website, is not available to the public. When the link is clicked, a document is downloaded which claims that the "reference is not provided due to possible copyright restrictions." However a quick online search pulls up the document¹, the content of which provides reasons for why the DOE refuses to release this information to the public. Making the public jump through so many hoops to access this information is at best, sloppiness and laziness on DOE's part and at worst a deliberate move to avoid transparency, even though they claim they are. In summary, the exemptions listed for cultural exemption in the DEIS are a non-issue. The only reason that they are still being considered from exemption is because the NHRP has not specifically stated that they are ineligible. The DOE knows this but is making it the public's responsibility to access proper documentation that argues against the DOE's claims.

¹http://etec.energy.gov/Environmental_and_Health/Documents/Cultural/SSFL_2001_Area_4_Cultural_Resources_Survey_Excerpts.pdf

126-1

126-1 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. Also refer to Section 2.7, "Offsite Impacts" and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD to gain a better understanding regarding residual contamination in Area IV and the potential for offsite impacts.

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126-2 Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of this topic and DOE's response. Regarding the commenter's remarks about a document referenced in Draft EIS Appendix F (W&S Consultants 2001) and the unavailability of this document for downloading from the DOE's EIS website, the document possibly contains protected material and DOE cannot provide copies of such material. The link the commenter references only provides limited excerpts from the document; excerpts have been edited to remove information regarding locations of archeological sites.

Commenter No. 126 (cont'd): Brad Visacki

The DOE benefits from turning Area IV into "cultural property" because it would make the area ineligible for clean-up. The DOE consistently mentions the Burro Flats cave painting when talking about Area IV, even though the painting is located in Area II. They are attempting to use this as further evidence to support making Area IV into "sacred property".

The DOE is aware that none of the proposed archaeological sites in Area IV are eligible for protection, which hinders them from claiming the majority of the area as a "sacred site". However, since the NRHP has not officially determined that the proposed archaeological sites are in fact ineligible, the DOE will continue to abuse the loophole by not cleaning up the area: "W&S Consultants 2001 Class III Inventory/Phase I Archaeological Survey of the Santa Susana Field Laboratory Area 4, Ventura County, California An archaeological survey of Area IV in 2001 was the first systematic archaeological survey conducted at SSFL. This study consisted of an on-foot, intensive survey of the 290-acre Area IV. The study identified four previously unknown archaeological sites (CA-VEN-1772, -1773, -1774, and -1775). These four sites were recommended as ineligible for listing in the National Register of Historic Places." - page F-12

Even though the cultural sites were considered ineligible for listing in the National Register of Historic Places, and thus are not exempt from remediation, the DOE is clearly hoping they will be in the future: "However, because formal concurrence of ineligibility has not been sought from nor been given by the State Historic Preservation Officer at the California Office of Historic Preservation, in accordance with Title 36, Code of Federal Regulations, Part 800, the four sites are treated as eligible for inclusion in the NRHP until determined otherwise." - page F-12 It is unacceptable that the DOE is proposing areas to be exempt from remediation that have not yet and likely will never be deemed eligible for exemption. DOE should be operating with the mindset "better safe than sorry", rather than "counting our chickens before they hatch."

Even if Area IV was to be considered a sacred site, it still may not stop the cleanup process. The DOE is trying to work every angle in order to lessen the amount of responsibility they have on the site. The severity of risks involved by not cleaning up Area IV heavily outweigh the importance of scattered lithic rock, and to think any differently would support an enormous social injustice towards the residents of Simi Valley.

According to the US National Parks Service's Guidelines for Evaluating and Documenting Traditional Cultural Properties:

One more point that should be remembered in evaluating traditional cultural properties--as in evaluating any other kind of properties--is that establishing that a property is eligible for inclusion in the National Register does not necessarily mean that the property must be protected from disturbance or damage. Establishing that a property is eligible means that it must be considered in planning Federal, federally assisted, and federally licensed undertakings, but it does not mean that such an undertaking cannot be allowed to damage or destroy it. Consultation must occur in accordance with the regulations of the Advisory Council (36 CFR Part 800) to identify, and if feasible adopt, measures to protect it, but if in the final analysis the public interest demands that the property be sacrificed to the needs of the project, there is nothing in the National Historic Preservation Act that prohibits this.

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Commenter No. 126 (cont'd): Brad Visacki

This principle is especially important to recognize with respect to traditional cultural properties, because such properties may be valued by a relatively small segment of a community that, on the whole, favors a project that will damage or destroy it. The fact that the community as a whole may be willing to dispense with the property in order to achieve the goals of the project does not mean that the property is not significant, but the fact that it is significant does not mean that it cannot be disturbed, or that the project must be foregone.²

The DOE has broken their agreement with the EPA to clean up the Santa Susana Field Laboratory by 2017, and instead has chosen to take advantage of a minority culture for personal benefits. By working with the Chumash Indians, the DOE can lessen the amount of land that they are responsible for cleaning up.

I urge you to consider these adjustments in the EIS, and advise that the DOE follow through with their contract to the AOC in order to clean up the Santa Susana Field Laboratory. The proper course of action is not always the easiest, and by cutting corners on the clean up, the DOE puts surround communities and future generations in harm's way.

Sincerely,

Brad Visacki

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² <https://www.nps.gov/nr/publications/bulletins/nrb38/nrb38%20introduction.htm#evaluate>

Commenter No. 127: Dallas Fuentes

Ms. Stephenie Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian St. Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

As a citizen and human being I am concerned about the Draft Environmental Impact Statement (DEIS) the DOE just released for the Santa Susana Field Laboratory. The first and most obvious concern I have is that all of the alternatives that the DEIS outlines would leave either 39% 91% or 99% contamination at the site. Any of these would violate the Administrative Order on Consent (AOC) that the DOE signed in 2010 which committed to a complete clean up.

Trying to justify these alternatives for any reason not only violates a commitment, but is completely foundless. As the DOE puts it they would prefer to rely on "natural attenuation" to clean up the contamination, in other words, they are hoping the contamination will lessen on its own over the next 70 years. This not only shows how little the DOE cares about an entire generation of people, but it is dangerously presumptuous that the contamination will remain solely on site in spite of natural weather conditions.

For example, the recent heavy rains California has seen will have washed contaminated sediment into the communities around the area. Now as we are seeing nicer weather, children will be playing outside in their backyards being exposed to these contaminants.

Even the third alternative, claiming a 99% cleanup sets a cleanup standard of 25 millirem/year which violates the 1995 DOE-EPA Joint policy stating that DOE sites must be cleaned up consistently with EPA Superfund guidance. To give perspective, 25 millirem/year is the equivalent of an unnecessary chest x-ray every month of your life, which the EPA as deemed non-protective.

Furthermore the notion that cleanup would pose unnecessary risk to the environment since contamination poses "little risk" is ludicrous. Trying not to disturb the environment is fruitless not only because it has already been disturbed, but also because it has been disturbed in such a

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127-1 Nowhere in the EIS does DOE imply that it intends to rely on natural attenuation as the primary cleanup action. DOE is considering monitored natural attenuation only under those circumstances in which low concentrations of certain chemicals have been demonstrated to be attenuating. DOE acknowledges your preference for cleanup in accordance with the 2010 AOC. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. With respect to the alternatives evaluated in the EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. The Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. These two alternatives would reduce (1) risk to the public and the environment and (2) potential impacts to visual, biological, cultural, and water resources compared to the Cleanup to AOC Look-Up Table Values Alternative. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. DOE acknowledges that implementation of any alternative would have to be approved by the DTSC. In addition, DOE is considering monitored natural attenuation only under those circumstances in which low concentrations of certain chemicals and radioactive constituents have been demonstrated to be attenuating.

127-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

127-3 DOE believes that the approach taken in developing this alternative is with the approach used by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by U.S. Environmental Protection Agency (EPA) at CERCLA sites. That is, it considers future land use and risk to human and environmental receptors.

DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would

Commenter No. 127 (cont'd): Dallas Fuentes

way that places the surrounding community at risk. This is also a blatant, meaningless excuse to avoid clean up, as for the entire operation of SSFL no concern was given for the environment in the utilization of trucks to bring in hazardous loads of spent commercial nuclear fuel from around the country. Even if the DOE has decided to be concerned about the environment in this way, there are better ways to go about clean up that will mitigate the environmental impact. However, even with the concern that the cleanup processes will impact the environment, the DEIS mentions no risk evaluation that was performed to determine the impact that the radiation will have on the plant and animal life in the area.

Thank you for taking the time to read my concerns. It is my hope that the DOE will take a responsible course of action and adhere to AOC and completely clean up the Santa Susana Field Laboratory, to protect not only the environment but especially the human beings who live in the area and have a right to live a healthy, cancer-free life.

Sincerely,

Dallas Fuentes

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represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range. The dose limit can be compared to the average annual radiation dose from natural background radiation received an individual in the United States of about 310 millirem per year.

127-4 This Final EIS is being prepared to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. The EIS considers alternatives to accomplish these tasks, and, consistent with NEPA requirements, each alternative addresses the potential impacts that implementing the alternative could have on several resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and traffic.

Chapter 1, Section 1.3, contains a history of the SSFL site that summarizes DOE's past activities in Area IV, including previous cleanup efforts. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the

Commenter No. 127 (cont'd): Dallas Fuentes

decisions included in the DOE EIS Record of Decision and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Potential risks to public health and safety under all proposed alternatives are evaluated in Chapter 4, Section 4.9, and Appendices G and K, of the EIS. In response to public comments on the Draft EIS, this Final EIS has been revised to more quantitatively address ecological risk receptors, such as risks to plants and animals requested by the commenter (see Section 4.5).

Commenter No. 128: Teens Against Toxins



Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

Thank you for the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for remediation of Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL). The following document contains a detailed discussion of Teens Against Toxins concerns with the DEIS.

Seven years ago, the regulatory agency, the Department of Toxic Substance Control (DTSC), issued an "Administrative Order on Consent" (AOC), legally binding the Department of Energy (DOE) to cleaning up the contamination to the most protective standards. Nevertheless, the DEIS proposes four alternatives to cleaning up to the standards set by the AOC: one, that would leave up to 39% of contamination still on site, a second that would leave about 91% of the contamination still on site, a third which would leave up to 99% of the contamination in place, and finally, no cleanup whatsoever.

Teens Against Toxins has been actively raising awareness and participation in the younger generation affected by the contamination at SSFL since 2009. We have had numerous representatives from six different high schools¹ and four different middle schools² in the communities near the site.

We are an organization comprised of youth—at most we are 22 years old—even so, we understand the value of integrity. If you don't clean up after yourself, the mess doesn't simply go away. Instead, someone else faces the consequences.

This DEIS completely violates the 2010 AOC and instead looks at whether or not it should be required to clean up its mess at all. As the polluter, it is unethical for the DOE to be deciding how much contamination to remediate, especially considering they are already legally bound to the most protective standard. The people facing the consequences of exposure to this contamination cannot afford to delay.

¹ High school at Moorpark College, Oak Park, Agoura Hills, Viewpoint, Westlake Village, Newbury Park

² A. E. Wright, Medea Creek, La Reina, Viewpoint

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128-1 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values). It also evaluates alternatives that consider risk to human health as well and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2 of this CRD, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 128 (cont'd): Teens Against Toxins

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Commenter No. 128 (cont'd): Teens Against Toxins

Detailed Comments on the Department of Energy's
Draft Environmental Impact Statement Issued January 2017

I. Background

SSFL is a former nuclear and rocket engine testing facility that is contaminated with radiological and chemical pollutants. The 2,850 acre site is nestled in the hills between Simi Valley and Chatsworth, but is also surrounded by the communities of Canoga Park, Woodland Hills, West Hills, Westlake Village, Agoura Hills, Oak Park, Calabasas, and Thousand Oaks.

SSFL was established in the late 1940s by the Atomic Energy Commission (AEC) as a testing facility, or "field laboratory", for nuclear reactor development work too dangerous to perform close to a populated area. Safety considerations were "subordinated to other concerns from the outset."³ The site location was ranked 5th out of 6 candidates in terms of safety of meteorological conditions, in part because of nighttime migration of potentially contaminated air into the San Fernando Valley. Nonetheless, the site was chosen as a nuclear testing site, largely due to convenient drive times from nearby universities. A reactor power limit was set to limit radioactive inventory, due to these poor site conditions, as well as the decision to forgo a containment structure in favor of discretion during the Cold War. Only a decade later this protection was disregarded, when the AEC built the Sodium Reactor Experiment (SRE) with power twenty times the limit.

Had the site remained remote, perhaps the sloppy safety practices and waste produced by operations would not have been an issue. However, in the decades following the establishment of SSFL, the population mushroomed around the area. Currently, over half a million people reside within ten miles of the site. As SSFL sits on a hill, the contamination that was created throughout the site's operational years has been migrating into the surrounding neighborhoods every time there are heavy rains, winds or fires. A study by the UCLA School of Public Health found elevated cancer death rates among both the nuclear and rocket workers from exposures to these toxic materials⁴. Another study by UCLA found that the rocket testing had led to offsite exposures to hazardous chemicals by the neighboring population at levels exceeding EPA standards⁵. A study performed for the federal Agency for Toxic Substances and Disease Registry found elevated cancer rates in the offsite population associated with proximity to SSFL⁶.

The site was home to ten nuclear reactors, half a dozen critical facilities, a plutonium fuel fabrication facility, and a "hot lab" for decladding and disassembling irradiated nuclear fuel shipped in from around the AEC/DOE national nuclear complex as an initial step for reprocessing. SSFL was mainly used for the development and testing of liquid-propellant rocket

³ SSFL Panel Report, pg. 10.

⁴ *Epidemiologic Study to Determine Possible Adverse Effects*, September 1997.

⁵ Katner, Adrienne, *Potential for Offsite Exposures Associated with Contaminants from SSFL*, PowerPoint presentation, 18 June 2014.

⁶ Morgenstern, Hal, *Cancer Incidence in the Community Surrounding the Rocketdyne Facility in Southern California*, March 2007.

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128-2 Please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion of concerns about offsite impacts and DOE's response. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

128-3 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE acknowledges that there are chemical and radioactive constituents above background levels in parts of that portion of SSFL for which it is responsible, Area IV and the NBZ. Note that rocket testing was not conducted in the areas of the site for which DOE is responsible. DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which it is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

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engines for the US space program from 1949 to 2006 and the operation of a US government-sponsored liquid metals research center from 1966 to 1998. Nuclear reactors were active from 1953 to 1980.

In 1959, the SRE reactor, with twenty times the permissible power limit for a reactor facility so close to residences, experienced a partial nuclear meltdown, in which thirteen out of forty-three fuel rods melted. Unable to initially find the cause of the power excursion coming from the reactor, the workers inexplicably resumed operations only a couple of hours after shutting it down. The SRE operated for an entire week and a half more, with clear indicators that it wasn't properly functioning (e.g. off-scale radioactivity readings), until being finally shut down. A report by an eyewitness, John Pace, indicates that the reactor room became so radioactive that the large equipment door had to be kept open to vent radioactivity from the room to the outdoors⁷.

While partial nuclear meltdown of the SRE is the most notorious incident, numerous other accidents, releases, and spills occurred. In 1964, a SNAP reactor suffered damage to 80% of its fuel. In 1969 another reactor suffered similar fuel damage. There were numerous nuclear fires in and around the Hot Lab. For decades, radioactively and chemically contaminated reactor components covered with sodium were disposed of in open pits (the sodium "burn pit"). Sodium combusts when it reacts with air and explodes when it comes into contact with water. Workers reportedly shot at barrels of waste to ignite them and let them burn out in open air in the pits.

In addition, tens of thousands of rocket tests were conducted at SSFL, resulting in significant chemical contamination. A \$41.5 million study, conducted by EPA in 2012, found 500 hits of "concentrations of radioactive materials exceeding background levels" and "man-made radionuclides were found in 423 of the 500 samples"⁸. As previously mentioned, contamination from SSFL has not stayed on site. One example, trichloroethylene (TCE), is detected in groundwater onsite the most and at the highest concentrations⁹. According to NASA¹⁰, "TCE had been used in large quantities by the USAF and NASA to clean liquid-fueled rocket engines both before and after each test." There is strong evidence that even short-term TCE exposure causes kidney and liver cancer, as well as harmful effects on the nervous, respiratory, and immune systems. TCE was found in drinking water wells onsite that were shut down only after workers were exposed to levels above state and federal limits¹¹. TCE also migrated to wells nearby the field lab and was discovered at concentrations 134x the maximum contaminant level deemed safe by the EPA¹².

⁷ <http://data.nbcstations.com/national/KNBC/1a-nuclear-secret/>

⁸ EPA Radiological Characterization Study Results Fact Sheet, December 2012, pg. 2.

⁹ MWH, Work Plan Phase 2 Groundwater Site Conceptual Model SSFL, April 2007, pg 1.

¹⁰ https://ssfl.msfc.nasa.gov/public-involvement/docs/SSFL_TCE_Final_Fact_Sheet.pdf

¹¹ Weston Solutions, Inc., Preliminary Assessment/Site Inspection Report SSFL, 30 November 2007, pg. 2.

¹² Katner, Adrienne, Potential for Offsite Exposures Associated with Contaminants from SSFL, PowerPoint presentation, 18 June 2014.

128-4

128-4 The scope of this EIS is limited to cleanup of DOE's portions of SSFL for which it is responsible, Area IV and the NBZ. DOE was not involved in rocket engine testing; contamination resulting from the testing is being addressed by NASA and Boeing. DOE's groundwater contamination remains within the boundaries of Area IV and the NBZ. Boeing and NASA cleanup activities are only considered as part of cumulative impacts (Chapter 5 of this Final EIS). Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities, is being evaluated by the DTSC; in the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b).

Regarding EPA's soil findings, EPA concluded that "Approximately 70 percent of soil samples with radionuclide concentrations greater than the [field action levels] are located within five Area IV Radiological Areas of Interest." With regard to the commenter's reiteration of the EPA statement of "man-made radionuclides were found in 423 of the 500 samples," EPA also stated in their radiological study that exceedance of their field action levels "do not necessarily represent locations of contamination." (Please see the EPA report *Final Characterization of Soils, Area IV and the NBZ, Area IV Radiological Study*, page 4-1 [HGL 2012b]). Also, please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response.

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In 2010, the agency responsible for overseeing the cleanup, the California Department of Toxic Substances Control (DTSC), signed Administrative Orders on Consent (AOC) with NASA and the DOE to cleanup their portions of the site to background levels of contamination – meaning all detectable contamination they created would be cleaned up. The key components of the AOC are: that it is a legally-binding contract (DOE cannot unilaterally decide not to comply with any part of it), that all places where contamination exceeds soil (including structures) above background will be remediated (no averaging of contamination concentrations across large areas), and “leave in place” cleanup methods are prohibited.

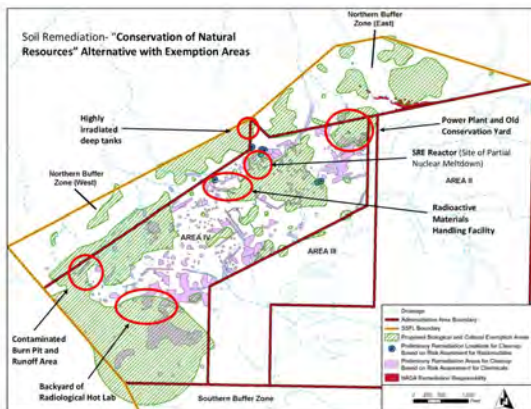
In 2012, DOE issued a notice “Public Participation in the Development of Alternatives to be Considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement.” In it DOE acknowledged that DTSC was the regulator and had the regulatory authority over the cleanup, that DOE was obligated to carry out the AOC requirement to clean up to background, and that the EIS would be limited to alternative ways to achieve that cleanup standard. Instead, the DEIS is looking at *whether* to cleanup the contamination it is responsible for, rather than *how* to abide by the commitments they made.

II. Debunking the Myth that “Conservation of Natural Resources” Alternative is Protective of Human Health and the Environment

The “Conservation of Natural Resources” is a misleading title, in that it doesn’t actually help protect the natural resources. According to pg. S-37 of the DEIS, the Conservation of Natural Resources alternative is “the alternative with the least soil removed.”

When subtracting the total amount of soil removed under this alternative from the 1.4 million of cubic yards of contaminated soil, including an additional exemption of 5% of the soil volume remediation DOE would likely take advantage of¹³, this leaves 99% of the contaminated soil onsite.

The graphic to the left shows you how little chemical (purple) and



¹³ DEIS pg S-21.

128-1
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128-5

128-5 For further discussion of the volumes of soil to be excavated and the volumes left behind, refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Therefore, SSFL Area IV and the NBZ are not “heavily contaminated.” The exemption areas identify locations where added precautions to soil clean up may be applied to protect biological and cultural resources. The exemption areas are not totally exempt from cleanup actions; rather if there is contamination within those exemption areas that poses a risk to human health or the environment, it would be subject to a carefully planned and focused cleanup (intended to result in minimum disturbance) to reduce concentrations to below human health and ecological risk-based limits.

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radiological (navy dots) contamination in the soil would be remediated under the "Conservation of Natural Resources" Alternative. At most, the map of the graphic only depicts 10% of the chemicals and radionuclide contamination DOE is required to clean up under the AOC.

As you can see, all of the red circles on the map highlight areas that are historically heavily contaminated (e.g. the SRE Reactor and Radioactive Materials Handling Facility)¹⁴ and are depicted as having the most amounts of radiological contamination in the graphic. The green-striped shaded regions, representing the soil that DOE would be exempt from cleaning up due to biological or cultural resources, have been imposed in those areas.

Under the "Conservation of Natural Resources" Alternative, contaminated areas like the following would **not** be remediated:

- The SRE Reactor site, where a partial nuclear meltdown occurred in 1959
- The power plant and Old Conservation Yard, where barrels of chemical and radioactive waste were disposed of
- The contaminated burn pit, where barrels of chemical and radioactive waste were discarded, burned and left exposed to the elements (and its highly contaminated runoff area)
- The backyard of the radiological Hot Lab, where fires raged in the early 2000's
- The Radiological Materials Handling Facility, where all the radiologically impacted materials were to be sent before being disposed of
- Highly irradiated deep tanks in the hills above the SRE reactor site

It is preposterous that the DOE claim areas like the SRE reactor site and power plant area as biological resources (they are simply concrete and remaining structures) or cultural resources (they are not Native American). With the implementation of the "Conservation of Natural Resources" Alternative, the most dangerous places on site would be left untouched. This is unacceptable and as none of these biological and cultural resource exemption areas have been approved, it is morally reprehensible for the DOE to assume they can excuse themselves from the most hazardous part of their mess.

The DOE is claiming that:

"Impacts on vegetation and wildlife habitat and biota would be reduced because the remediated acreage (about 32 acres) would be less than that under the Cleanup to AOC LUT Values Alternative. Impacts would be slightly less than those under the Cleanup to Revised LUT Values Alternative (32 acres vs. 40 acres). The smaller area affected by remediation would increase the feasibility

¹⁴ "The majority of the soil samples containing concentrations exceeding background were found in the surface soil at locations previously suspected of having contamination, such as the Radioactive Materials Handling Facility and the former Sodium Reactor Experiment". EPA Radiological Characterization Study Results Fact Sheet, December 2012, pg. 2.

128-5
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128-6

128-7

128-6 Commenters have inferred that exemption areas would be treated as untouchable and would not be subject to any cleanup. This is not the case. Rather, the areas in which the exemption process would be applied are established to protect certain biological and cultural resources, but as indicated in Chapter 2, Section 2.3.2, of this EIS, if levels of constituents in these areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals that would result in minimum disturbance. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD, for a discussion of this topic.

128-7 Please see the response to comment 128-6. Exemptions for biological and cultural resources are provided for in the 2010 AOC; the AOC also requires that "actions taken pursuant to this Order by DOE shall be undertaken in accordance with applicable local, State, and Federal laws and regulations." At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS, DFW, and others for several years (see Appendix E, Table E-4 of this Final EIS) and had conducted multiple biological resource field surveys. Based on the AOC and consistent with applicable local, State, and Federal laws and regulations, DOE has identified areas in Area IV and the NBZ that contain federally-listed or State-listed species, other sensitive species, and critical or sensitive habitats that warrant protection. Interactions with USFWS and CDFW have continued since the publication of the Draft EIS and the areas in which the exemption process would be applied has been revised, consistent with the information included in a Biological Assessment required as part of the Endangered Species Act Section 7 consultation. There was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results the ongoing interactions with the USFWS and CDFW, as well as the Biological Opinion, in identifying those areas in which the exemption process would be applied.

With regard to the number of protected species reviewed in the Draft EIS, the EIS preparers used accepted professional practice to include information about threatened or endangered species (either listed federally or by California) that could possibly occur on a site (based on their distributions and ecological requirements) before narrowing to species known or expected to occur on the site based on review of this information and field surveys. The number of species identified in this Final EIS reflects the results of the Biological Opinion from the USFWS (with input from the CDFW). This process is explained further in Chapter 3, Section 3.5.5, "Threatened, Endangered, and Rare Species" of this Final EIS; the species and habitats identified for protection

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of restoration, and there would be more undisturbed habitat between remediated portions of the site, facilitating recolonization by native plant and wildlife species and beneficial soil organisms.”

pg S-49

The argument that there would be a more negative impact to the environment by cleaning up the toxic mess than leaving it there to continue to damage the health of local residents, plants, and animals is preposterous. The environment would not be devastated by cleaning it up—it was ruined the moment it became contaminated. The best hope for the natural resources onsite is to leave the land as close to its original state as possible (cleaning up to background levels of contamination), so that it may heal and restore itself without toxic chemicals and radionuclides present in the soil and groundwater.

128-8

The Lack of a Basis for Remedial Exemptions Due to Biological Resources

In the 2010 AOC it was stated that the entire site must be cleaned up to local background levels. It allowed a very narrow exception to be considered only to the extent that the U.S. Fish and Wildlife Service, “issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.”¹⁵

There has, however, been no such Biological Opinion from the U.S. Fish and Wildlife Service. The exemption does not apply. Indeed, the US Fish and Wildlife Service did issue a Biological Opinion¹⁶ several years ago to EPA for its preparatory work for the cleanup, which was to involve cutting down much of the vegetation so a radiation survey could be done. It concluded no problem; mitigation measures could be done, and that indeed, the cleanup of the contamination was critical for protecting biological resources.

128-7 cont'd

The DOE DEIS, however, says that they are not going clean up anything in any of their self-declared biological exemption areas. The AOC says that if biological resources are identified mitigation measures are to be taken, not that DOE could avoid cleanup altogether.

The only two plants found in Area IV and the NBZ are Braunton’s milk-vetch which is federally listed as endangered, and the Santa Susana tarplant, which is state listed as rare. In the DOE DEIS they claim that there are 12 additional plant species that may exempt them from remediation, but this is nothing more than a weak excuse to not clean up those areas. Of these 12 plants, none of them have actually been observed on the site, and many of them are neither federally listed as endangered nor threatened. In terms of animals, there are none that are both

¹⁵ *Administrative Order on Consent*, December 2010, pg. 45.

¹⁶ United States Department of Interior, Fish and Wildlife Service. *Biological Opinion for the Santa Susana Field Laboratory Area IV Radiological Study Project, Ventura County*. 25 May, 2010.

are discussed in Appendix B, Section B.5. Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD, for additional information on this topic.

The National Historic Preservation Act (NHPA) Section 106 Programmatic Agreement (PA) will address protection measures for cultural resources during cleanup activities. This PA is being developed in consultation with the SHPO and other consulting parties, including the federally-recognized Santa Ynez Band of Chumash and non-federally recognized tribes, and DTSC. For this EIS, DOE defines cultural resources for the purposes of impact analysis broadly to encompass definitions of cultural resources in NEPA and the CEQ NEPA implementing regulations, historic properties as defined in the National Historic Preservation Act (NHPA) Section 106 regulations, and cultural resources in the AOC (see Chapter 3, Section 3.11.1, including the text box titled “Types of Cultural Resources”).

128-8

DOE acknowledges your preference for cleanup in accordance with the 2010 AOC. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent” of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. With respect to the alternatives evaluated in the EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Two alternatives, the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative, would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. These two alternatives would reduce (1) risk to the public and the environment and (2) potential impacts to visual, biological, cultural, and water resources compared to the Cleanup to AOC Look-Up Table Values Alternative. The comparative analysis of these alternatives allows the public and the DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. DOE acknowledges that implementation of any alternative would have to be approved by the DTSC.

Also refer to Section 2.7, “Offsite Impacts” and Section 2.10, “Public Perceptions about Waste and Contamination in Area IV” of this CRD to gain a better understanding regarding residual contamination in Area IV and the potential for offsite impacts.

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federally listed and have been found on the site. Of all the 7 animals mentioned on the DOE DEIS 5 have a 'low' potential of occurrence and 2 are 'not expected' to occur on the site at all.

The Lack of a Basis for Remedial Exemptions Due to Cultural Resources

Under the 2010 AOC, only federally-recognized Native American artifacts would trigger area exemption from remediation. There are no recognized cultural artifacts in Area IV and the NBZ that would exempt DOE from cleaning up¹⁷.

How Finding Adequate Backfill Soil is Non-Issue

The DOE claims that finding replacement soil for what they excavate that meets the AOC LUT values would be too difficult. They state that the "chances of finding acceptable backfill soil are better under the Cleanup to Revised LUT Values Alternative or Conservation of Natural Resources Alternative because the assumed requirements for concentrations of chemicals in the backfill soil would be less stringent."¹⁸

However, the DEIS shows that "Gillibrand" fill meets all requirements, with the minor exception of two constituents that exceed the LUT values. The DOE itself says these constituents and the exceedance rates are not a risk for human health or the environment¹⁹. Furthermore, the AOC states that if a source of backfill soil could not meet all the AOC LUT values, the DTSC and DOE would enter into consultation over the matter and the DTSC would determine the best available fill. In other words, DOE has no authority nor valid justification in trying to claim for themselves that there are no viable backfill sources. DTSC will make the decision on which backfill soil would be best to use, which would appear to be Gillibrand. There is therefore no issue with finding a suitable fill under the AOC, and the DOE's argument is a non-issue.

The Problems with the Risk-Based Cleanup Standards Proposed

The DOE claims on pg. S-33 of the DEIS to be using "the hypothetical onsite suburban residential exposure scenario (using the direct pathways)" for the risk assessment, but actually disclose in a footnote on pg. S-31 that they left out the garden component of that scenario. The garden component is required to be included in order to achieve the most accurate risk estimates and protective cleanup standards in that it is responsible for 99 to 99.9% of the dose. In other words, they low-ball the dose by a factor of 100-1000 or so.

Furthermore, DOE is proposing to average concentrations across larger areas, which may lead to "hotspots" being overlooked and unsafe levels of contaminants being left unremediated:

¹⁷ <http://www.ssfllareaveis.com/comment.aspx>

¹⁸ DEIS pg. S-100.

¹⁹ DEIS pg. D-45.

128-7
cont'd

128-9

128-10

128-11

128-9 The 2010 AOC requires all chemicals and radionuclides in backfill soil to be below their respective LUT values in order for the soil to be used in Area IV. Final EIS Appendix D, Section D.6.2 presents soils test results for the Gillibrand facility in Simi Valley. These data show that soil samples would exceed LUT values for antimony, anthracene, and phenanthrene and the EIS states in Section D.6.2 that none of these results is at a level that would pose a risk to human health or the environment. Per the 2010 AOC, "If an onsite or offsite source of backfill soils that achieves all Look-Up Table values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill." DOE will continue to work with the DTSC to identify a source of backfill prior to initiation of soil remediation activities. Refer to Section 2.3, "Suitable Backfill Soil" of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source, including interactions with DTSC.

128-10 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. They permanently bind the property, regardless of who owns the land. North American Land Trust will monitor and enforce the easement. The use of RBSELS that do not include the indirect garden pathway is appropriate for this future land use.

A garden pathway has been included for the offsite suburban resident for which an evaluation has been added in this final EIS in response to public comments.

128-11 EPA does area average its residential risk assessments. EPA guidance: *Supplemental Guidance to Risk Assessment Guidance for Superfund: Calculating the Concentration Term*. Publication 9285.7-081 [EPA 1992]), states the basis for risk determination assumes a random exposure over an exposure area. The exposure area is an assumed location where exposure to the chemical in soil may occur. Risk from exposure to a chemical is then related to the arithmetic mean concentration of that chemical averaged over the entire exposure area, regardless of the current or future land use type. Because the true arithmetic mean concentration cannot be calculated with 100 percent certainty from a limited number of measurements, the EPA recommends that the upper 95th percentile confidence limit of the arithmetic mean at each exposure point be used when calculating exposure and risk at that location (EPA Office of Solid Waste and Emergency Response.) This is also consistent with DTSC Human and Ecological Risk

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Cleanup based on risk assessments for individual units accounts for the receptor's exposure to an **average** concentration in the unit in contrast to the point-by-point evaluation of the Cleanup to AOC LUT Values...where each sample must meet the LUT values for each constituent. (pg S-33)

Contrary to DOE's claims, EPA guidance says you are not to average when the scenario is residential or any other scenario where the exposure cannot be expected to be random. Averaging amounts of contamination over a general area dilutes the total concentration of contamination, in that readings of concentrations of contamination in hotspot areas will be diluted by readings of less contamination nearby. This proposal violates the AOC in that averaging would lower the total amount of contamination needing to be cleaned up and excuse the DOE from cleaning up each individual spot where there is contamination to a non-hazardous level. This also violates the 1995 DOE-EPA Joint Policy that all DOE sites must be cleaned up consistent with EPA Superfund guidance²⁰.

According to the DEIS, "chemically impacted soil would be removed to achieve a cancer incidence risk of 1 chance in 1 million and a hazard index of 1; radiologically impacted soil would be removed to ALARA levels below the dose rate of 25 millirem per year."²¹ As demonstrated in the chart to the right, we ran EPA's dose compliance calculator for a residential scenario, using soil as the medium, and all of the calculator's default parameters, except for the concentrations of the constituents. Instead, we replaced the default concentrations with site-specific

Estimated Radiation Dose From DOE's Proposed Alternative 3 Cleanup Levels
source for dose estimate: EPA Dose Compliance Calculator for Residential Exposure

Radionuclide	EPA Dose Estimate of DOE Proposed Cleanup Level (millirem/yr)	Equivalent to how many chest x-rays per year?
Actinium-227	151	75.5
Americium-241	2180	1090
Bismuth-210	10.1	5.05
Curium-243	238	119
Cobalt-60	11.3	5.65
Cesium-137	13.8	6.9
Europium-152	11.3	5.65
Europium-154	112	56
Helium-3	11,200	5,600
Nickel-59	5290	2,645
Protactinium-231	1240	620
Lead-210	3110	1,555
Polonium-210	5510	2,755
Plutonium-238	4190	2,095
Plutonium-239	4220	2110
Radium-223	126	63
Radium-224	7.13	3.565
Radium-226	47.9	23.95
Radium-228	184	92
Strontium-90	1540	770
Thorium-227	8.94	4.47
Thorium-228	9.20	4.6
Thorium-230	4140	2,070
Thorium-232	3330	1,665
Uranium-234	4350	2,175
Uranium-235	69.3	34.65
Uranium-238	333	166.5

128-11
cont'd

128-12

Office guidance that states: "In cases where there is adequate characterization, the 95 percent upper confidence limit (UCL) of the arithmetic mean may be used for the exposure point concentration."

To perform the risk assessment for the Conservation of Natural Resources Alternative, DOE used 10,000 square meter or about 2.5 acres as the exposure area. In conducting a cleanup under a standard risk assessment, locations with higher concentrations, the commenter's hotspots, are located first and targeted for cleanup. Averaging of the remaining soil is then performed to assess the post cleanup risk. Cleanup continues until the post cleanup risks are less than the risk-based cleanup criteria. The map produced by DOE (Figure S-5 in this EIS) illustrated where any chemical or radionuclide may exceed a LUT value; however, exceeding a LUT value is not necessarily evidence of contamination and if present, that the chemical or radionuclide poses a risk to a future user. Use of risk-based criteria for cleanup decisions is protective of the health and safety of the public.

Regarding the 1994 DOE-EPA Joint Policy, please see the response to comment 128-13.

128-12 The differences between the values the commenter derives from the EPA dose calculator and the values presented in the EIS are a direct result of the default parameters in the EPA dose calculator including the indirect garden pathway. Please see the response to comment 128-10.

DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

²⁰ DOE & EPA, *Policy on Decommissioning DOE Facilities Under CERCLA*, 22 May 1995.

²¹ DEIS pg. S-36.

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values that the DOE claims yield a dose of 25 mrem/yr²². The EPA calculator's dose estimates were far above the 25 mrem/yr limit—in some cases hundreds of times higher. The final column of the chart puts the doses in the context of annual chest x-rays. If the DOE went ahead with the proposed risk-based cleanup, they would be forcing the surrounding communities to be receiving a dose equivalent of getting thousands of unnecessary chest x-rays each year.

128-12
cont'd

The 25 mrem/yr standard also violates the 1995 DOE-EPA Joint Policy that all DOE sites must be cleaned up consistent with EPA Superfund guidance, which has declared 25 millirem as non-protective.

128-13

III. Transportation and Waste Disposal

The DEIS only looks at four route options for the transport of contaminated soil and waste to disposal facilities. The offsite disposal routes are presented in the context of "traffic increases" in Table 5-7 in the DEIS. The DOE is attempting to paint the of transportation and offsite disposal of contamination as cumbersome and potentially more hazardous to human health than if they were to leave the contamination onsite. All four route options go through numerous residential neighborhoods. The first two routes go from the site entrance to State Route 118 north of the site, while the second two routes go from the site entrance to the US 101 freeway. In both cases, the target destination is Puente Hills Intermodal Facility, a train station 60 miles from SSFL that isn't even operational yet.

Transportation methods besides trucking soil to rail lines were not considered because "such a large infrastructure project would unreasonably delay initiation of the project relative to the availability of other options." Considering how the DOE committed to cleaning up the site by 2017, and a cleanup has yet to begin, this no longer a valid excuse. For example, if it wished to the DOE could look into transportation that involved little to no trucks such as conveyor system to a nearby rail line. There are rail lines within a mile of the site that could be reached without passing through a single home, and transporting the contaminated soil by train would be more beneficial to the environment in terms of reduced greenhouse gas emissions and probability of accident. Hauling nuclear and chemical soil contamination 60 miles to Puente Hills should not be considered as the best option.

128-14

In August of 2014, after NASA similarly attempted to utilize the truck traffic as a scare tactic, a SSFL Transportation Options Task Force produced an 18-paged detailed report of not only viable alternate truck routes, which avoided residences, but also practical alternate methods of removal and transportation of waste²³. The Task Force formed shortly after NASA released its final EIS in March 2014. If a team of half-a-dozen community advocate organization representatives and local residents can compile in only a matter of months, what DOE had 7 years to do and *still* claims it would take too long to do a thorough job, one can only assume the DOE is intentionally stalling to scare residents into not wanting a cleanup because they think it

²² Table G-24 on pg. G-93 of the DEIS

²³ *Preliminary Overview of Alternative Transportation Options for SSFL Cleanup*, 7 August 2014.

128-13 The 1995 DOE-EPA Joint Policy creates a framework for the conduct of decommissioning of DOE facilities and provides guidance to EPA Regions and DOE Operations Offices on the use of CERCLA response authority to decommission such facilities. However, it only ensures compliance with CERCLA requirements for remedy selection at National Priorities List facilities. Since SSFL is not on the National Priorities List, CERCLA requirements for the selection of a remedy do not apply to it. However, note that this EIS does include an alternative/scenario consistent with the approach and process used by EPA in CERCLA cleanups. DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

128-14 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives. DOE's intent is not to portray the transportation and offsite disposal of contamination as cumbersome, nor to represent the conditions as potentially more hazardous to human health than if the contamination was left onsite. Additionally, DOE did not intentionally try to alarm residents into not wanting a cleanup because they think it would be more dangerous to remove the contamination than leave it there. But it is true that the more soil that is removed from the site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 128 (cont'd): Teens Against Toxins

would be more dangerous to remove the contamination than leave it there. If the opposition to an AOC-compliant cleanup's main concern is contaminated soil being driven by their home, then they will be happy to know that DOE is able to provide an array of plausible solutions, whether it be conveyor systems or routes to trains that don't pass by homes.

128-14
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IV. Benzene as a Case Study for Elevated Risk to Human Health Posed by the Proposed Cleanup Alternatives

While there may never be any way to directly correlate the contamination from SSFL with the clusters of pediatric and adult cancers in the surrounding communities, it is utterly shocking to our community that the polluters, DOE included, are not taking a "better safe than sorry" approach to the impacts of the contamination and their cleanups on human health.

According to page 1409 of the Standardized Risk Assessment Methodology Revision 2 Addendum (SRAM), Benzene has historically been found in soil, soil vapor, surface water, permanent sediment, and groundwater at SSFL. Benzene is classified as the most dangerous type of carcinogen- Class A "human carcinogen" in the risk assessment that was done for chemicals of potential concern²⁴. According to cancer.gov, "having a parent who was exposed to certain chemicals...such as Benzene...increases the risk for Langerhans Cell Histiocytosis (LCH)."

Grant was only six months old and living in Northridge when he was diagnosed with Langerhans Cell Histiocytosis (LCH); he had a strange lesion on his chest that was continuing to slowly grow and the doctors finally diagnosed his disease via biopsy.

LCH is an immune disorder that affects the white blood cells, like leukemia, and is considered an atypical blood cancer.

Grant's parents were told by doctors that the odds of Grant having LCH at his age are about 1 in 2,000,000. Neither of his parents have a history of cancer. During her pregnancy, Grant's mother ate organic food, did not take any medications, and did everything she could to have a healthy pregnancy.

Grant's parents were living in Northridge while pregnant, about 10 miles from the SSFL. Neither she nor Grant's father had any other known



Photo by Melissa Bumstead

128-3
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²⁴ Final Standardized Risk Assessment Methodology, Rev. 2 Addendum, August 2014, Table 7-2.

Commenter No. 128 (cont'd): Teens Against Toxins

exposures to the other chemicals linked to LCH. Grant's parents know of at least one other case of LCH in the San Fernando Valley; the odds of there being two cases of this disease in such a close area are extremely rare.

According to Table 4.1 on pg 80 of the Site Safety and Health Plan Area IV Radiological Study²⁵, the highest concentration of Benzene historically detected in surface and groundwater at SSFL is 500 µg/L. That is 100x the limit. While the DOE currently has no preferred alternative for groundwater remediation in the DEIS, they have two proposals:

1. Under the "Groundwater Natural Attenuation and Monitoring Alternative" there would be no removal or treatment of ground water and at most they would monitor for 50 years. In most cases, they claim 20 years would be sufficient for monitoring the different plumes of contaminated groundwater²⁶.
2. Under the "Groundwater Treatment Alternative" only 4 of the 7 plumes would actually be treated. The DOE is claiming that two of the plumes would not be amenable to treatment and a third would naturally attenuate to meet the maximum contamination limit set by the USEPA by 2025²⁷. In terms of treatment for volatile organic compounds (benzene's classification) the DOE is proposing soil vapor extraction (SVE). They would basically be pulling contaminated vapor through the subsurface into wells using a vacuum pump placed at the top of the well. DOE claims 5 years of pumping would be sufficient²⁸. There is sampling data from the Resource Conservation and Recovery Act Groundwater Work Plan²⁹ that shows benzene concentrations that are right at the 5 ppb limit in/near two of the plumes that would not be cleaned up. Benzene was also reported in concentrations above its limit in wells offsite in 2007³⁰.

In terms of soil contamination, under the Cleanup to Revised AOC LUT Values alternative and the Conservation of Natural Resources alternative, Benzene would not be cleaned up at all. This is because under the proposed revised LUT values, DOE is attempting to exclude any contaminant that is found in less than 2.5% of the soil samples is excluded from the list of chemicals to be cleaned up.

According to Table 3.13 on pg 61 of the Chemical Data Summary Report³¹, 17 of the 1610 samples collected to test for Benzene had "hits", or concentrations above background. None of the 1610 samples contained Benzene in concentrations above the 115 µg/kg limit DOE is proposing. Because the DOE limit is so high, less than 2.5% of samples would be considered contaminated by the proposed standards, meaning, DOE would be exempt

²⁵ prepared for USEPA by HGL 2011

²⁶ DEIS pg. 2-50

²⁷ DEIS, pg. 2-52

²⁸ *ibid.* pg. 2-53

²⁹ prepared for DOE by CDM 2015

³⁰ MWH, *Offsite Data Evaluation Report*, December 2007, pg. 3-6.

³¹ prepared for DOE by CDM 2017

128-3
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128-15

128-16

Since the publication of the Draft EIS, DTSC has published, in September of 2017, the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (DTSC 2017b), which includes a draft transportation study. The transportation related conclusions of the EIR are summarized in Chapter 2, Section 2.2.4, of this EIS. Please note that this DTSC EIR included the truck route proposed in this EIS (Woolsey Canyon Road) in their environmentally superior alternative. This method of transportation was identified by the DTSC Draft EIR as the least environmentally impactful while being the most technically feasible (Appendix J of the DTSC EIR).

As described in Appendix D of this EIS, for purposes of analysis under the truck/ rail transportation option, the Puente Hills Intermodal Facility in City of Industry, California (about 50 60 miles from SSFL), was used as the representative facility for the transfer point where wastes would be placed on railcars for delivery to appropriate disposal facilities. In selecting this facility as a representative facility for purposes of analysis, there was no intent to preclude other locations that could be used or developed for intermodal transfer of SSFL material to trains. However, any location to be used for intermodal transfer would need to be assessed for suitability.

128-15 The benzene data reported in the comment is not representative of the current condition of Area IV groundwater. The highest concentration of benzene reported from Area IV groundwater is 15 micrograms per liter, measured in 1993 from a sample collected in monitoring well RS-54. Benzene rapidly degrades in groundwater and is no longer observed at concentrations above the maximum contaminant levels of 5 micrograms per liter. Benzene was not detected in any of the monitoring wells sampled for benzene in the 2016 groundwater remedial investigation. RS-54 was last sampled for benzene in 2017 and benzene was not detected at the 5 micrograms per liter AOC LUT value (based on the multi-lab reporting limit).

For the plumes that would be remediated, soil vapor extraction, described in Chapter 2, Section 2.6.3 of this Final EIS is one of the most commonly used technologies for removing volatile organic compounds, such as benzene, from subsurface soils. During soil vapor extraction, the air stream is treated to remove the volatiles and they are not released into air.

As discussed in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith

Commenter No. 128 (cont'd): Teens Against Toxins

from remediating any Benzene at all under the alternatives that would utilize the revised AOC LUT values.

The LUT value set in the AOC is 5 µg/kg. DOE used a limit 23x less protective for their RBSL of 115 µg/kg. This RBSL is 32x less protective than the RBSL value they should have been using, which incorporates exposure through having a backyard garden (0.0036 µg/kg)³². The ecological receptor risk-based screening limit (EcoRBSL), or the limit determined safe for the plants and wildlife, is 0.31 µg/kg³³. The RBSL DOE is proposing to use as a cleanup standard is 371x less protective than that. How can the DOE be claiming that the risk-based cleanup standards are conserving the natural resources of SSFL when they would be exposing living organisms to concentrations of Benzene hundreds of times higher than the limits EPA deems safe for living organisms?

V. Inflated Background Values for Arsenic

Despite the fact that no average concentrations above 10 mg/kg were found at the sampled sub-sections of Area IV and the NBZ, the background concentration of arsenic was cited as 46 mg/kg³⁴. Historically, background comparison levels for arsenic have been determined to be 15 mg/kg³⁵ and even as low as 12 mg/kg³⁶.

The 2010 AOC DOE signed with DTSC names DTSC as the authority when it comes to determining remediation goals for chemicals. In 2012, when developing chemical LUT values for the pollutants to use as cleanup standards that would be compliant with the 2010 AOC, the DTSC relied on background threshold values (BVT). BVT's were determined by finding the highest detectable concentration of chemicals in nearby soil, which was as similar as possible to the soil found at SSFL. The highest possible BVT for SSFL was determined to be 39.7 mg/kg³⁷.

All of a sudden, in 2013, the DTSC lists the AOC LUT value as 46 mg/kg, with no further explanation as to how that value was derived from a 39.7 mg/kg BVT. In 2014, in a *Comparative Analysis of Background vs. Risk-based Cleanup Scenarios for the Soils at SSFL*, the BVT is listed as 39.7 mg/kg while the LUT value is given as 46 mg/kg.

As previously mentioned, the LUT value for arsenic in the DEIS is 46 mg/kg. According to the DOE, this value is "the lower of the background threshold value [BVT] for soil or the method detection limit"³⁸. How did the DOE pick 46 mg/kg as their background concentration

³² *Final Standardized Risk Assessment Methodology, Rev. 2 Addendum*, August 2014, pg. 1071.

³³ *Ibid*, pg. 1591

³⁴ DEIS pg. D-8.

³⁵ MWH, *Soil Background Report, SSFL*, September 2005, pdf pg. 58.

³⁶ MWH, *Determination of a Southern California Regional Background Arsenic Concentration in Soil*, March 2008, pdf pg. 5.

³⁷ URS, *Chemical Soil Background Study for the Santa Susana Field Laboratory*, July 2012, pdf pg. 1.

³⁸ DEIS pg. D-8

128-16
cont'd

2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

128-16 As stated by the commenter only 17 of 1610 samples collected for benzene had detections above background. No background screening value was used for benzene; that is, no detections were eliminated based on a benzene background value. Therefore, there were 17 of 1610 samples in which benzene was detected. That is a 1.06 percent detection rate which is in the range of the expected false positives for detection. Therefore, presence of benzene was considered by DOE to be not substantiated. This substantiation of the presence of benzene had nothing to do with setting the revised AOC LUT values for the Cleanup to Revised LUT Values Alternative which are based on risk criteria and the proposed future use of the property. See the response to comment 128-10 for an explanation of why DOE did not include an indirect garden pathway.

128-17

128-17 In this EIS, DOE uses AOC LUT values established by DTSC. In June of 2013, DTSC provided the *Chemical Look-Up Table LUT Technical Memorandum, Santa Susana Field Laboratory, Ventura County, California* that listed the AOC LUT value for arsenic as 46 milligrams per kilogram derived from the background threshold value (BTV) of 39.7 milligrams per kilogram. As discussed in its memorandum, the LUT values were calculated by DTSC based on the greater (not lower) of the BTV or the DTSC background study method reporting limit (in the case of arsenic the BTV), plus a measurement uncertainty. This added uncertainty accounts for the difference between the BTV value of 39.7 milligrams per kilogram and the LUT value of 46 milligrams per kilogram.

Commenter No. 128 (cont'd): Teens Against Toxins

for arsenic, when they claim to be picking the smaller of two values, one of which was 39.7 mg/kg (the BVT)?

128-17
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VI. Lack of Transparency and Hindrance of Public Input

The DEIS can be downloaded from and the public can submit their comments through a website generated by the DOE (www.ssflareaiveis.com). It was promptly discovered that three dozen of the documents referenced in the DEIS are inaccessible through the hyperlinks the DOE provided on the website. As shown in Figure 1, the hyperlinks lead to a PDF that stated the reference was withheld (most often) due to copyright restrictions. It is intolerable that the DOE is using references in their DEIS that are not being made available to the public for review.

Schulz, T. W., and S. Griffin. 2001. *Practical methods for meeting remediation goals at hazardous waste sites*. Risk Analysis 21(1):43-52.

Schulz, T. W., and S. Griffin. 2001. *Practical methods for meeting remediation goals at hazardous waste sites*. Risk Analysis 21(1):43-52.

This reference is not provided due to possible copyright restrictions. Please try the above URL or contact:

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Figure 1- January 26, 2017

Figure 2- February 28, 2017

Maintenance was scheduled and performed for the website on January 24, 2017. Only a couple of the "reference not provided" pages that were there instead of the reference documents were updated to include working links to the reference documents themselves. Beginning the day of the scheduled maintenance (1/24) numerous complaints were submitted to the DOE in reference to the "missing" reference documents for the DEIS. The complaints were submitted to an email address, ssfl_doe_eis@emcbc.doe.gov, that had appeared to have been generated for the specific purpose of commenting on the DEIS (figure 1). Even as recently as January 26, 2017 (2 days after the site maintenance), the "reference not provided" pages that are linked to the reference document hyperlinks displayed the email address (figure 3). However, by January 31,

Name	Date modified	Type
583_Hardlerode+2015	1/26/2017 3:07 PM	Adobe Acrobat D...
572_Schultz+and+Griffin+2001_Practical...	1/26/2017 3:05 PM	Adobe Acrobat D...

Figure 3- Timestamp for Figure 1

2017, the email address had been disconnected (figure 4). The "reference not provided" pages no longer display it as a means to contact the DOE (figure 2).

128-18

DOE apologizes for the problems encountered contacting DOE for references. For those references that were not appropriate to post on the SSFL Area IV EIS website (e.g., sensitive cultural resource information, copyrighted information) there was a note with an email address when one clicked on the reference. The email address was not intended to be used for the submission of EIS comments, although members of the public began to attempt to send comments through that email address. The email address was then disabled to avoid confusion. On the SSFL Area IV EIS website, the note hyperlinked to references not appropriate for posting on the EIS website was changed providing a U.S. mail address and a phone number to request a copy of sensitive references that were unavailable on the EIS website.

Commenter No. 128 (cont'd): Teens Against Toxins

The community was overjoyed that we had found a means to effectively communicate and submit our concerns about and suggestions for the DEIS. Since the beginning of the public comment period for the DEIS, the community has been emailing Stephie Jennings (the NEPA Document Manager for DOE and contact person for the DEIS) asking why the DOE is not accepting comments submitted by email, when it is the most appropriate and sustainable form of communicating available in our modern society. The DOE has contested that the other ways to submit comments are sufficient for public input on the DEIS, even though the public has been blatantly dissatisfied.

Subject: Failure Notice
Date: January 31, 2017 at 3:23:26 PM PST
To:
 Sorry, we were unable to deliver your message to the following address:
 <ssfl_doe_eis@emcbc.doe.gov>
 Remote host said:
 550 No such user (ssfl_doe_eis@emcbc.doe.gov)

Figure 4- DOE DEIS email address disconnected

128-19

128-19 Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for submitting public comment. Comments could have been submitted directly via the SSFL Area IV EIS website. In response to comments about issues with submitting public comments on the EIS website, early during the public comment period DOE expanded the capacity of the website to accept longer public comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted public comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

**Commenter No. 129: Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



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RE: Comments on the Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (DOE/EIS-0402) (SSFL), Ventura County, California

Dear M. Jennings,

On behalf of the Resource Conservation District of the Santa Monica Mountains (RCDSMM), thank you for the opportunity to submit comments on the Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the SSFL (DEIS). The RCDSMM is a non-regulatory, locally-led Special District of the State of California that fosters the conservation and enhancement of local natural resources through research, watershed and community-based planning, education and on-the-ground restoration, demonstration, landscape-infrastructure and architectural design projects. The RCDSMM is uniquely chartered by Division 9 of the CA Natural Resources Code to be responsive to the needs of our community, public and private land stewards alike. RCDSMM's expertise is in the specific resource conservation issues of the Wildland-Agricultural-Urban interface. RCDSMM is uniquely positioned to liaise between public/private landowners and regulatory/enforcement officials and agencies toward achieving sustainable communities and resource conserving land use approaches.

As a non-regulatory reviewing and resource agency in the Santa Monica Mountains, as well as portions of the Simi Hills, including the subject property and the Bell Canyon and Chatsworth Reservoir areas, the RCDSMM is actively involved in monitoring resources and local restoration efforts in the area. We prepared the 2011 *Upper Bell Creek Subwatershed Plan* for the Bell Creek Headwaters Council of Bell Canyon, the majority of which subwatershed is SSFL land. Since completion of that plan, RCD staff have continued study of the SSFL property, watersheds, and adjacent lands, including submission of a Conceptual Area Protection Plan (CAPP) of the critical Habitat linkage lands immediately adjacent to SSFL in the Simi Hills for the California Department of Fish and Wildlife, and with three semesters of upper level undergraduate and graduate level architectural design studio courses at Woodbury University. We acknowledge and

- 1 -

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Resource Conservation District of the Santa Monica Mountains**



appreciate the cooperative involvement of the various land stewards and stewardship groups, including DOE, who have given their time in support of those various study efforts. Our work has also included assistance in the preparation of documentation for the sites application to the National Register of Historic Places as a Cultural Landscape, and in the planning and design of post-remediation interpretive and educational approaches at SSFL.

Please note that RCDSMM places human health as the highest priority consideration, and recognizes that reduction of contaminants to safe levels must be achieved according to measurable standards.

Bioregional Context

The relatively undivided and sparsely developed Simi Hills and Santa Susana Mountains (SHSSM) are of great importance to the people and land managers of the region, as they represent the core areas of a primary habitat linkage that provides the Santa Monica Mountains (SMM) with the source of its sustainable biodiversity. However, the connectivity between core habitat areas in the SMM, Simi Hills (SH), Santa Susana Mountains (SSM) and the Los Padres National Forest (LPNF) has been severely degraded by intrusive "fingers" of development, fenced off freeways and railroads, etc. Mitigation for these environmental impacts that occurred prior to the California Environmental Quality Act has been the primary driver for 20 years of wildlife corridor studies, the most recent being the South Coast Missing Linkages Project (<http://www.scwildlands.org/projects/scml.aspx>). It is important to note that a habitat linkage is more than a "wildlife migration corridor", but is rather a contiguous area connecting significant habitat patches (sources or sinks) within which species can feed, breed and adapt over time to changes in the ecosystem, and through which genetic diversity can flow over generations to maintain species health and viability. As such, the definition of "corridors" is only part of the consideration of ecological importance of the Subject Property and SSFL. The SSFL is the heart of the habitat linkage that is most critical to maintaining the ecological health of the entire Santa Monica Mountains ecosystem, as well as the Simi Hills ecosystem it currently anchors.

The areas that are the subject of this DEIS include the very top of three watersheds- that of the Los Angeles River, Malibu Creek, and Arroyo Simi. As such, the impacts of the soil removal proposed by the DEIS alternatives must be understood in this context. To excavate up to 130 acres of these combined watersheds, removing all of the soil and replacing with backfill amounting to less than 2/3s of what was removed- as currently proposed in the AOC Look-Up Table Alternative must necessarily result in alteration of the surface hydrology. Downstream impacts to the miles of Oak Riparian woodlands downstream have not been adequately studied, but replacement of a positively draining surface with a non-draining concavity will certainly be problematic for the local hydrological cycle, those impacts increasing with the amount of excavation and removal

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129-1

- 129-1 The alternatives and mitigation and minimization measures under consideration in this Final EIS have been configured to control the rate of runoff from the site to more closely match existing runoff rates and limit the potential for increases in erosion from the site or downstream. See Final EIS Chapter 6 for a presentation of mitigation and minimization measures that would promote drainage and erosion control. For example, Minimization Measure 3-1 (Surface Water – Permits and Plans) states that the proposed Erosion Control Plan (ECP) will include design features that replicate the natural site drainage patterns to the extent possible, with minimal constructed features to allow for long-term erosion control and successful revegetation. The proposed Revegetation and Habitat Restoration Plan (Minimization Measure 5-4) will have connectivity to and will supplement the ECP. As a result, the controlled drainage of the site during and following precipitation events is not expected to change habitat conditions downstream of the project area.

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proposed.

Integrated Cultural and Natural Resources

In our letter of comment at the Feasibility stage of the Rim of the Valley Special Resources study, the RCDSMM noted "some important resources that are not yet designated National Historic Landmarks" and commented that:

"As rare as this convergence of aspirations from widely separated eras and cultures, is the opportunity to interpret Native American cultural resources within the largely intact ecological systems that supported their activity and sourced their cosmology. It is a contemporary mistake to compartmentalize the physical characteristics of an historic cultural site from its spiritual and cultural significance. The oak woodlands, the horizontal and sectional geometry of the exposed rock formations and the converging valleys all contributed to the inevitability of this site as the Chumash place of solstice observation, of the human effort to support the cause of Coyote in his yearly contest with Raven to bring the sun back from its journey south and diminishing day-life. The "artifacts" of the human hand ought not be separated from the "artifact" of the ecosystem and spaces that directed the hands and supported the ceremony. To remove the soil and the ecosystems is to remove the Sacred Landscape identified here by the federally recognized Santa Ynez Band of Chumash Indians in support of all the historic tribes with standing in this Traditional Landscape."

Comments Specific to the DEIS

Our numbered comments below are the result of an analysis of the very thorough DEIS, and developed within our core competencies as a resource monitoring and habitat restoration organization:

1. Summary

1.1 - Restoration ecology, and the current state of restoration science and technology is such that there are very real and permanent choices being made when native habitats and their soils are removed, particularly those specialized upland soils as those found within Oak Woodlands or Native Grasslands. Despite what agreements might otherwise stipulate, **Land remediated predominantly by soil removal to the level of "non-detect" (likely to bedrock level) cannot be returned to a native state.** Indeed, many ecotypes, once removed along with their historic and evolved soils are not restorable; we have, for example, no examples of successful Oak Woodland restoration. (Los Angeles County Oak Woodland Conservation Management Plan 2011).

1.2 - We appreciate that the DOE has investigated alternatives that consider risk-based approaches to contaminant (and therefore habitat and soil) removal, and acknowledge many of the likely impacts that we will reiterate in our comments herein. However, **the document does not evaluate a risk-based alternative based entirely on an Open Space future land use,** which would be the least impactful of natural resources, by legal definition safe for that intended use under current state law, and so therefore a "reasonable alternative" under the definition provided in the DEIS. **The Boeing Company has stated that they intend to leave the**

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|| 129-1
cont'd

|| 129-2

|| 129-3

129-2 DOE agrees with how difficult and uncertain it is to restore habitats after several feet of soil have been removed and makes the point about how important the exemption area concept is by proposing focused soil removals of only areas posing a tangible risk to human health and ecological resources. Furthermore, the Final EIS presents measures that would avoid, minimize, rectify, reduce, eliminate, or compensate for potential adverse impacts on the environment. Minimization measures are inclusive of methods, procedures and protocols, design features, and best management practices aimed at reducing the environmental impact of project activities. Final EIS Chapter 6, Section 6.1, includes a range of minimization measures, including those that reduce footprint and protect the environment. In particular, Minimization Measure 5-3 (Biological Resources –Trees) states that DOE would develop a Tree Management and Preservation Plan that would provide information necessary to avoid or minimize impacts to oak woodlands.

129-3 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS was revised to evaluate the open space land use scenario.

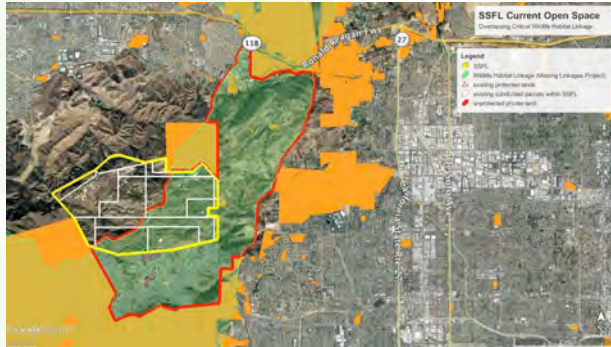
**Commenter No. 129 (cont'd): Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



property as protected open space. Should that commitment come to pass and be accommodated by public ownership or similar permanent protections, **we urge the DOE to be prepared for such an outcome by developing an alternative that evaluates this Open Space level of risk-based remediation.**

129-3
cont'd

2. Regional Ecological Context



2.1 - The open space of the Simi Hills contains our best remaining habitat linkage between the Santa Monica Mountains, the Santa Susana Mountains, and core wild lands of the Los Padres National Forest/Sierra Madre Mountains.

2.2 - Without that linkage, the genetic viability of a wide range of diverse species is greatly diminished; in the case of the Santa Monica Mountains population of Pumas, **without at least one new breeding individual using this linkage into the Santa Monica Mountains every two years, the local population has a nearly 100% chance of extinction in the next 50 years.** (2016, Riley, et al, Findings of the Royal Society B)

2.3 - the SSFL lands of which DOE is a part are the largest block of habitat remaining between the proposed 101 crossing and the existing 118 crossing, and **cover approximately 75% of the width of the Wildlife Habitat Linkage** as mapped by the *Missing Linkages* project, and **more than 25% of the remaining private land without residential development in that Habitat Linkage** between the proposed 101 Wildlife Crossing Improvements Project (overpass and underpass) and the existing 118 freeway wildlife tunnel. (see illustration above). As such, its continued functionality is of critical importance particularly in the next few decades, if we are to maintain our current level of regional biodiversity and avoid local extinctions.

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**Commenter No. 129 (cont'd): Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



2.4 - The area currently known as the SSFL, also becoming known as Sky Valley (Chumash: stawayok 'I'alaipay), is a storied, beautiful, culturally unparalleled and ecologically critical landscape.

3. Risk-Based Alternatives- Open Space Land Use Alternative needed

3.1 - Though not provided within the DEIS, other analyses have shown that the majority of the habitat, soil and subsoil materials that would require removal in the risk-based standards of current state law for Open Space use would occur largely in areas of developed, paved, compacted, and or heavily graded lands. Much of that land that is not otherwise covered by former and current buildings, paving or compacted non-vegetated areas, is now covered by non-native and ruderal (mixed native/non-native) habitats on disturbed soils. In addition, **the total volume of soil removal under the Open Space risk-based approach of the current law would be exponentially reduced**, therefore much reducing the total time of active remediation and fragmentation of Habitat and disruption of Wildlife Linkage functionality.

3.2 - The habitat to be removed under "Suburban Residential" or "AOC Look-Up Tables" (background) standards expands greatly into critical ecotypes, the loss of which is proposed for a critical time span for determining the ultimate genetic viability of local species.

3.3 - **The dominant remediation technique proposed in the DEIS is soil removal.** Given that many of the contaminants (including naturally occurring varieties) move relatively quickly through soils, much of this soil and subsoil removal will be taken completely to the sandstone bedrock below

3.4 - **Habitat restoration requires soil.** Even with soil, restoration is not always possible. There are no existing examples of successful Coast Live Oak woodland restorations, for example. Backfill of poor suitability can lead to long term weed management requirements, putting adjacent high quality habitat at risk for degradation

3.5 - **Backfill is not soil.** The DEIS accurately notes the problems associated with imported backfill, and that material must be located that meets the standards of the alternatives. The source of such compliant backfill for any alternative is not identified in the DEIS. What additional, off-site ecological damage would be caused in the collection of this material?

3.6 - A "background" level as defined under current administrative agreements would by definition come from areas that are free of human-deposited contaminants; that is, from undeveloped open space such as one might find in a protected natural area like a local, state or federal park space, or otherwise undeveloped private land covered in native habitat. Therefore, **the environmental impact of both removal and replacement would in fact be two-fold, first involving the destruction of a native habitat and soil bank at this site, then the destruction of the soil bank and habitat at the "donor" site.**

3.7 - We understand that should no replacement backfill meeting the AOC standards be available, that replacement material with less stringent standards may be allowed as

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129-4

129-4 DOE recognizes that much of the soil that would require removal under a risk-based approach for an open space land use would occur in the more developed areas of Area IV. The impacts on native habitat and plants and animals from soil removal in these developed areas would be less than similar soil removals in undeveloped areas and may even result in a net beneficial impact after restoration.

129-5

DOE acknowledges that an acceptable source of backfill that meets the LUT values has not been identified and notes the importance of a backfill soil that would support native plant communities. As described in Chapter 2, Section 2.4, of the Final EIS, backfill soils that meet the higher concentration limits under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resource Alternative should be easier to locate, although it still could be a challenge to identify backfill with similar physical, chemical, and microbial characteristics that could support re-establishment of native vegetation. DOE agrees that there should not be any removal of soil in Area IV without an adequate source of backfill identified. DOE plans to identify a source of backfill in the Soil Remedial Action Implementation Plan that must be approved by the DTSC prior to initiation of soil remediation activities. Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source. Because no source for backfill has been identified at this time, the need to evaluate impacts at source locations has not been determined. Once DOE and DTSC identify a location (or multiple locations) that would be an acceptable source of backfill material, DOE would evaluate whether additional NEPA analysis is required.

129-5

**Commenter No. 129 (cont'd): Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



replacement soil. In that case, **we recommend that the existing habitat meeting those decreased standards not be removed in the first place, and lost functionally at least for years, if not decades, if not permanently.**

3.8 - In such cases where replacement material can not be located, and where critical habitats such as Oak Woodlands, Native Grassland, Freshwater Marsh, and Venturan Sage Scrub, we recommend remediation by in-situ and longer horizon treatment techniques.

4. Critical Ecological and Cultural Resources- Proposed Exemption Areas

4.1 – While we acknowledge and appreciate the identification of proposed exemption areas, many of the areas proposed for habitat, soil, and sub-soil removal at the DOE sites and throughout SSFL are of the most critical variety- including wetlands, riparian forests, and oak woodlands.

4.2 - The modern (rocket-age) and pre-modern (middle period Chumash) cultural resources of SSFL include numerous sites eligible for the National Historic Register, and one complex already on the NHR, the Burro Flats Painted Cave. Due to the security provided at the site since the 1950's, the Chumash cultural and ethno-astronomical sites exist largely the same ecological context in which they were created. Much of that context located on the DOE land that would be destroyed to a greater or lesser extent depending on the remediation approach selected. By comparison **most Southern California Native American cultural sites exist in completely urbanized or otherwise altered contexts, making SSFL an unparalleled cultural and educational resource in the greater Los Angeles metropolitan region.**

4.3 - Dr. Edwin Krupp, Director of the Griffith Park Observatory, and who theorized and then identified the summer solstice shadow events near the NRHP-listed Burro Flats Painted Cave site wrote that the site "comprises the only place on earth where our modern world heritage in space converges with the prehistoric reach for the sky.... For that reason, **the place is irreplaceably significant in the history of space exploration, ... in the history of California, in American history, and in the history of the world.**"

4.4 - While being considered in pieces at this stage of the environmental process, **the DOE, NASA, and Boeing administered areas of SSFL collectively are a cultural and ecological singularity**, and will be ultimately evaluated as such in the final analyses.

4.5 - **Therefore we appreciate that the DOE has identified some of these critical resources, and proposed Biological and Cultural Exemption Areas.** While it needs to be clarified if these areas would be permanently exempted from soil removal activities and associated permanent ecological impacts, this is a promising acknowledgment of these irreplaceable resources. **We have identified however critical Coast Live Oak Woodlands, a freshwater marsh complex, and rare native grassland that should also be added to the exempted/protected areas.** These are in the eastern portion of the site, and while the total area proposed for habitat and soil removal shown in the "Conservation of Natural Resources Alternative" is minimal in these areas, they should nonetheless be protected by similar exemptions. They are located upstream of, and adjacent to other critical cultural and ecological resources off-site in Areas III that would be negatively impacted by soil removal in these areas.

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129-6 The exemption areas identify locations where added precautions to soil clean up may be applied to protect biological and cultural resources. However, the exemption areas are not exempt from cleanup actions. As indicated in Chapter 2, Section 2.3.2 of this EIS, if levels of constituents in these areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals that would result in minimum disturbance. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent" of this CRD for a discussion of this topic.

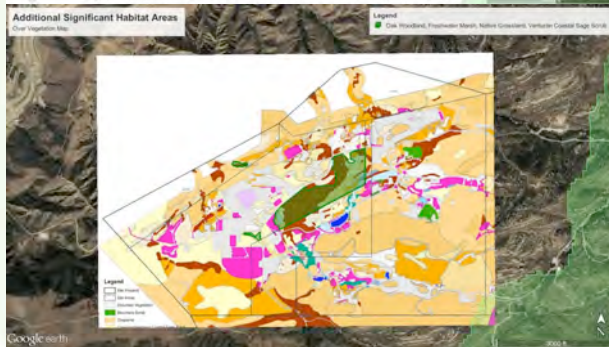
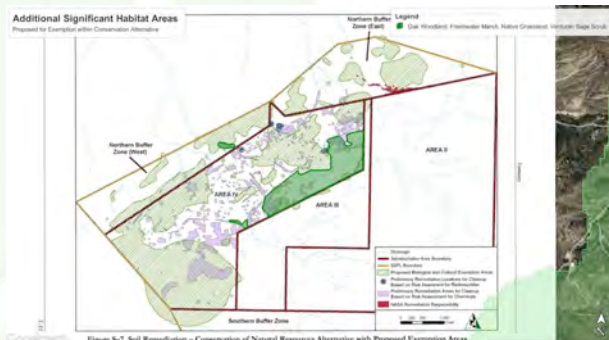
DOE recognizes that wetlands, riparian forests, and oak woodlands have critical value to biological resources. Coast Live Oak Woodlands and freshwater marsh habitats have been included in the exemption process approved by USFWS and CDFW. The coast live oak woodlands, freshwater marsh complex, and rare native grassland habitats identified in the comment as existing in the eastern portion of Area IV have been included in the Final EIS exemption areas.

Exemptions for biological and cultural resources are provided for in the 2010 AOC; the AOC also requires that "actions taken pursuant to this Order by DOE shall be undertaken in accordance with applicable local, State, and Federal laws and regulations." At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS, DFW, and others for several years (see Appendix E, Table E-4 of this Final EIS) and had conducted multiple biological resource field surveys. Based on the AOC and consistent with applicable local, State, and Federal laws and regulations, DOE has identified areas in Area IV and the NBZ that contain federally listed or State-listed species, other sensitive species, and critical or sensitive habitats that warrant protection. Interactions with USFWS and CDFW have continued since the publication of the Draft EIS and the areas in which the exemption process would be applied has been revised, consistent with the information included in a Biological Assessment required as part of the Endangered Species Act Section 7 consultation. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results the ongoing interactions with the USFWS and CDFW, as well as the Biological Opinion, in identifying those areas in which the exemption process would be applied.

**Commenter No. 129 (cont'd): Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



(see exhibits below)



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**Commenter No. 129 (cont'd): Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



4.6 - "background" level contaminant removal standards, or any increased risk-based remediation alternatives beyond that required for the "open space" use will add years of active excavation by heavy machinery to the remediation process, creating an ongoing impediment to wildlife use that is of critical importance to the functioning of our best remaining habitat linkage, at the very time that we are seeking to rescue at least one SMMts species from local genetic extinction by adding connectivity from the the SMMts through this very site to, and from, our genetic source material wilderness areas to the North.

4.7 - Land that is stripped of the cultural and natural resources will not support wildlife use, nor will it educate and inspire visitors. For this reason the National Park Service in its comment on the NASA DEIS noted that **land left in such conditions may not meet the standard of culturally and ecologically significant American lands that are required for administration by the National Park Service.** Other Open Space/Natural Resource management entities have similar missions, leaving the ultimate caretaking of the site in question.

4.8 - **Soil removal beyond that required by the risk-based values for Open Space** uses, to that of residential or beyond, **increases exponentially the footprint of habitat loss and fragmentation**- and indeed, the risk that such residential development will in fact occur, since in those scenarios, residential standards will have been met, and ecological impediments to development will have been removed.

5. Recommendations and Conclusion:

5.1 - Therefore, since "background" level approaches lead to conditions that are in fact

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129-7 DOE evaluated alternatives to the proposed cleanup to 2010 AOC LUT values that would involve less excavation and soil removal and therefore fewer potential impacts on biological and cultural resources. These alternatives (the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative) recognized Boeing's stated future use of its property as open space. In the Draft EIS, the cleanup levels for these two alternatives were based on risk to a suburban resident without a garden, which would also be protective of a recreational user. In this Final EIS, consistent with Boeing formalizing the commitment of this land to open space with the Grant Deeds of Conservation Easement and Agreement that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. (In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements [conservation easements] with Ventura County [Ventura County 2017a, 2017b]. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site). DOE added a scenario under the Conservation of Natural Resources Alternative that establishes cleanup levels based on risks to a recreational user and ecological (flora and fauna) receptors (while retaining the scenario addressing a residential user without the garden pathway).

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129-8 DOE acknowledges your support for remediation in accordance with risk-based legal standards for open space and that the closest alternative to this recommended approach is the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

**Committer No. 129 (cont'd): Clark Stevens, Executive Director,
Resource Conservation District of the Santa Monica Mountains**



technically un-restorable despite "agreements" to do so, we recommend that the least intrusive approach to remediation that complies with existing risk-based legal standards for Open Space be utilized. At this point, the "Conservation of Natural Resources" alternative is closest to that recommended approach, but **we urge the DOE and the rest of the SSFL land stewards to develop a new Alternative that addresses the stated intention of the landowner, the best outcome for ecological sustainability in the long term, and the generally acknowledged public interest in seeing this property preserved as Open Space.** The AOC standards and resulting remediation requirements were agreed to years ago without prior evaluation of the resulting extent of soil removal that would otherwise not be required under the law. The true spatial extent and ecological impacts are just now being publicly mapped and evaluated for the first time with this DEIS. Such agreements made without benefit of this information should be re-evaluated, as they represent decisions made on behalf of the public without knowledge of the actual implications to the public's resources. We cannot both require standards that result in widespread soil removal and expect a return to the native state of the habitat. We are in fact faced with making decisions that will result in more or less acreage of habitat lost, and at a more or less permanent level, based on the total amount of soil footprint lost.

5.2 - For more than 50 years The RCDSMM has been directed by a board of local volunteers and driven by a mission to assist both public and private landowners in voluntary natural resource conservation. Many of those decades of work have included habitat restoration. We have seen the science of restoration evolve, have contributed to the scientific literature on the subject, and understand the potential and limitations of restoration science. Rather than applying a blanket standard to the entire site, then averaging the results, **we urge the DOE and other stewards at SSFL to evaluate the remediation in a site-specific approach**, allowing for the greatest amount of contaminant removal in areas where the existing resources are already highly degraded, and decreasing to the least impactful risk-based standard for Open Space or "exemption" in those areas that are most critical for ongoing habitat function and connectivity, and those that are most difficult an slow to restore.

5.3 - Finally, we urge the current stewards and regulators of this unique and storied landscape to take the long view, and revisit remediation approaches that allow for time-frames longer than those currently proposed. The abundant and unprecedented artifacts of this landscape remain from the culture that left them here many hundreds of years ago, in much the same ecological context in which they were created. **In kind, we ask that the DOE consider approaches and time frames that look at least beyond this generation in order to retain the cultural resources, the old stories, the ecological resources, and companion species that have been left to our care.**

Respectfully submitted,

Clark Stevens, Architect
Executive Officer

Rosi Dagit, Senior Conservation Biologist

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129-9 Comment noted. Regarding impacts to biological exemption areas please see the response to comment 129-6. The exemption process and controls that will be used to minimize impacts to biological resources are described in the USFW Biological Opinion (see Appendix J of this EIS).

129-10 Comment noted. As described in the responses to your comments and in Chapter 2 of this EIS, DOE is considering clean up approaches, including use of the biological resources and cultural resource exemption processes that would minimize unnecessary impacts to the distinct cultural and ecological resources in Area IV and the NBZ. As described in this Final EIS Chapter 6, "Measures to Minimize Impacts and Mitigation Measures," DOE presents measures that would avoid, minimize, rectify, reduce, eliminate, or compensate for potential adverse impacts on the environment, including ecological and cultural resources.

Please note that DOE does not own the property in Area IV or the NBZ and cannot determine the ultimate land use for the property. As discussed in Chapter 1, Section 1.5, of this Final EIS, the property owner, Boeing, intends to preserve the land as open space for the public's benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

Commenter No. 130: Travis Brooks, Restoration Ecologist,

LAND IQ



April 11, 2017

Ms. Stephie Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

RE: Measures To Mitigate Impacts To Braunton's Milk-Vetch And Santa Susana Tarplant Related To Soil Cleanup In SSFL Area IV And NBZ

Dear Ms. Jennings,

We have reviewed the Draft Environmental Impact Statement (DEIS) for remediation Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL) prepared by the U.S. Department of Energy (DOE), and supporting documents related to impacts to Braunton's milk-vetch (*Astragalus brauntonii*) and Santa Susana tarplant (*Deinandra minthornii*) from cleanup of the soil to background levels in Area IV and the NBZ, including the placement of backfill soil and re-contouring. Both plants are California endemics and occur with California sage scrub and chaparral vegetation communities at SSFL.

The requirements for cleanup of the contaminated soil are set forth in the 2010 DOE and California Department of Toxic Substance Control (DTSC) Administrative Order on Consent (AOC). There is a narrow exemption in the AOC for biological exemption if the United States Fish and Wildlife Service (USFWS) issues a Biological Opinion that finds that the particular cleanup in a particular SSFL location would violate Section 7(a)(2) or Section 9 of the Endangered Species Act and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site, and the exception is unavoidable by other means. USFWS has not made this finding.

In our professional opinion, the unavoidable impacts for these species related to soil cleanup to background levels as agreed to in the 2010 AOC can be reasonably mitigated with a combination of specific conservation, restoration, and management measures. This opinion is based on the available reports for these two species, the existing examples of successful restoration activities of the species at other SSFL sites, and our own experience successfully restoring habitat of sensitive species in southern California.

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130-1 As stated in Chapter 2, Section 2.3, of the Draft EIS, DOE described proposed exemption areas in the Draft EIS and recognizes the fact that the proposed exemption areas are subject to refinement as planning and coordination with appropriate agencies proceed. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS subsequently issued its Biological Opinion, a copy of which is included as Appendix J of this EIS. This Final EIS reflects the results of the Biological Opinion on the exemptions areas in Area IV and the NBZ.

130-2 The need to prepare restoration plans well in advance as emphasized in your comment is consistent with and supported by the analysis in the EIS. DOE's has incorporated Measures to Minimize Impacts and Mitigation Measures for biological resources. As presented in Final EIS Chapter 6, Section 6.1, Minimization Measure 5-4 (Biological Resources -Revegetation and Habitat Restoration Plan), would be developed prior to initiation of ground disturbance or correction activities. Furthermore, Minimization Measure 5-7 (Biological Resources – Special Status species, including vascular and non-vascular plants) would include techniques to avoid and to minimize impacts to Braunton's milk-vetch and other sensitive plant species, such as the and Santa Susana tarplant. As described in response to comment 130-1, the USFWS has issued its Biological Opinion, a copy of which is included as Appendix J of this EIS. This Final EIS reflects the results of the Biological Opinion.

Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,

LAND IQ

There are estimated to be about 850 Santa Susana tarplants in Area IV and NBZ total (SAIC 2009 as cited in DOE 2016), a small fraction of the estimated population of over 13,500 at SSFL, which is one of 30 locations known in the CNDDDB in Ventura and Los Angeles counties (DOE 2016). The preferred substrate for the persistent populations of tarplant in Area IV and NBZ are sandstone outcrops and thin sandy soils, some of which will not be included in the footprint of the AOC soil cleanup areas; hence, impacts to many of the plants may be avoided altogether. The tarplant occurring in the developed area is often located in areas such as cracked pavement that mimics crevices in the naturally occurring sandstone outcrops. The seed source for the plants in the developed area is likely the sandstone outcrop population.

Braunton's milk-vetch is known from 16 remaining populations in the southwestern Transverse Ranges (eastern Santa Monica Mountains, east end Simi Hills, south base San Gabriel Mountains) and northern Peninsular Ranges (northwest side Santa Ana Mountains) within Los Angeles, Orange, and Ventura Counties (USFWS 2009). The milk-vetch is often found growing in disturbed areas, especially in carbonate soils areas, and is an early successional disturbance follower. Less than 1.8 percent of Braunton's milk-vetch critical habitat throughout its range potentially occurs within cleanup areas in Area IV and NBZ (USFWS 2010). Known populations of the milk-vetch are concentrated on the western portion of Area IV on two hills with calcareous soils derived from the Santa Susana formation, primarily in the Gaviota rocky sandy loam soil type (DEIS 2017).

Nothing in the record related to these two species indicates that there is reason to believe that restoration is not a viable method of mitigation. It is imperative, however, to prepare comprehensive restoration plans in advance of the actual start of soil cleanup at SSFL so that all aspects of the plans will be afforded the time necessary to achieve success. Depending on the actual soil cleanup plan and timeline, a phased approach for restoration for each species at the site would be preferable. Such an approach would provide data from the first implementation to refine methods in the later phases.

The following outline presents reasonable and specific, but not necessarily exhaustive, techniques and approaches for mitigating the unavoidable impacts to these populations by seed collection and conservation, plant propagation, and re-introduction of both seeds and plants to the site post cleanup. Key to the mitigation of the sensitive plant species is the overall revegetation of the site with appropriate native vegetation.

Seed Collection and Conservation

Before soil cleanup activity, viable seed should be collected from both sensitive plant species that occur in Area IV and NBZ, as well as adjacent populations that occur within SSFL and adjoining contiguous properties. Seed collection need not be limited to the footprint of the soil cleanup impact areas. Seed should be collected over multiple years, with at least one year in average to above average rainfall year conditions in order to maximize both the size of the seed collection and the genetic diversity of the collection across years. Seed outside of the project area could be collected within the limits of applicable natural resource agency collection permits (e.g.

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,**LAND IQ**

collecting only a small percentage of available seed from each population). Specific methods to increase collections can be implemented. For example, since Branton's milk-vetch is a disturbance follower, if there are not enough plants to collect from, then it may be necessary to crush or mow vegetation in suitable soils for the species (e.g. carbonate limestone soils) where there is likely a soil seed bank to open up the canopy and provide mechanical scarification to promote germination from the hard seed coat. This practice can be limited to scheduled cleanup areas where the soil will be removed to limit unnecessary disturbance to areas that would remain. Seed collected from the milk-vetch should occur at least in the second growing year following germination, to maximize the potential of seed collection.

A portion of the seed from both species should be deposited in a conservation collection at an authorized seed repository, such as Rancho Santa Ana Botanic Garden (RSABG), which has experience with both species, and the remainder should be cleaned, tested for viability (germination and purity), and properly stored for future nursery propagation when the cleanup areas are ready for re-introduction. The amount of pure live seed deposited in the conservation collection should be determined in consultation with the seed repository and responsible natural resource agencies. An established off-site nursery experienced with the germination and propagation of sensitive species should be selected for growing container plants and seed bulking one generation from the wild collected seed.

Propagation and Re-Introduction

Both plant species have been successfully propagated in a nursery setting. Therefore, it may be prudent to grow plants for the purpose of planting back on the site.

Branton's milk-vetch has been propagated by seed coat scarification techniques and germinated on calcareous soils in a nursery with 80 percent or more survivorship by Fotheringham and Keeley (1998) under various watering regimes in full sun, including 60 percent survivorship under a high watering regime on clay soil derived from volcanic parent material. Therefore, it seems likely that restoration using a temporary irrigation system may aid seed germination on soils other than just calcareous soils. And, RSABG has collected and germinated milk-vetch with a 100 percent success rate. Plants can produce hundreds of seeds when mature, beginning in the second year, and once successfully transplanted will multiply the contribution to the soil seedbank of the restored area of the long lived seed, estimated to have seed banks existing between 15 to 95 years (USFWS 2009).

Branton's milk-vetch has been observed in Area IV in Gaviota rocky sandy loam soils (DEIS 2017), which are weathered from sedimentary parent material and classified in the Entisol Soil Order. Entisols develop in unconsolidated parent material and because they are relatively "young soils," or rather when weathering processes are slow (e.g. in arid or semi-arid environments), there are usually no soil horizons except for an A horizon. Backfilled soil in the cleanup areas will mimic these conditions of young soils with poorly developed soil horizons and low organic material. The most likely source of backfill soil, the Gillibrand site, primarily consists of loamy soils that have weathered from sedimentary parent material (NRCS 2017). While the milk-vetch

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,

LAND IQ

can establish on very shallow soils (<21 cm deep), they are more common on deeper soils (Fotheringham and Keeley 1998), and as such, the re-contoured Gillibrand backfill material is not expected to be limiting to the milk-vetch. In fact, high levels of bare ground and open canopy, combined with a lower nutrient environment, will favor the life history characteristics of this nitrogen-fixing pioneer legume species. Although milk-vetch may be most readily established from seed, nursery grown material also can be transplanted into suitable areas, either in disturbed areas with or without backfill soils, using a temporary irrigation system. Thus, both strategies can be employed to establish this species.

Other potential restoration methods include identification of soil arbuscular mycorrhizal (AM) fungi by off-site soil research prior to transplantation to determine if specific AM fungi are associated with either the milk-vetch or the tarplant. Over 80 percent of terrestrial plant species form associations with AM fungi. We routinely use annual tarplants within the genus *Deinandra* to increase AM fungi at revegetation sites because this genus of plants is easily colonized. It is likely that Santa Susana tarplant also would form the beneficial symbiosis with AM fungi. AM fungi could be propagated for inclusion in soil amendments for seeding the site and/or for the nursery production of container plants.

Santa Susana tarplant has already been readily collected and nursery grown for re-introduction on SSFL (DOE 2016) and in other mitigation projects (e.g. see Fiedler 1991). The tarplant can be bulked one generation in the nursery to increase the amount of seed available for seeding back into the site. Tarplant can be seeded in adjacent un-disturbed sandstone outcrops without readily available source populations to seed them, disturbed shallow (approximately <21 cm) sandstone derived soils, and in select backfill soils that are determined to potential tarplant habitat.

Potential Management Actions for Rare Plants

Over time, the native vegetation in the revegetation areas will develop closed canopies between perennial shrub species in suitable sites in the cleanup area. There may remain microsites that preclude the development of a closed canopy, but most of the area is expected to increase in shrub canopy cover. Increasing canopy cover will result in reduced germination of Braunton's milk-vetch. If it is determined by agency consultation that the milk-vetch population requires larger growing populations to increase additions to the long-lived soil seed bank, then an adaptive management plan could be developed to artificially disturb the sites to increase canopy cover and hence bare ground to stimulate germination of known seed bank populations within the revegetated area. Alternatively, if access is provided to the SSFL after remediation is complete, then milk-vetch populations could be planned to occur along trails or access roads, which will be subject to trail maintenance, maintaining a more open canopy that is conducive to milk-vetch plant growth.

Two types of populations are expected, microsites with certain conditions that favor the fairly regular germination and growth of plants; and those areas where the population exists as part of the seed bank, which will be expressed following a future disturbance, such as fire or grazing.

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,
LAND IQ

General Revegetation of the Soil Cleanup Areas

General revegetation of the cleanup areas with appropriate native plant species will improve the overall quality of the restored and adjacent sensitive plant species habitat. Revegetation of the cleanup area with native plants would also increase the frequency of visitation by pollinators from the immediately adjacent habitat where both sensitive plant species produce viable seed. Regardless, Area IV and NBZ are not isolated from adjacent habitat that is frequented by pollinators, including on SSFL, and will not prohibit pollinators from finding the restored sensitive plant species.

A comprehensive restoration plan will include methods to select soil for backfilling at the site. Following soil cleanup, bare areas and the re-contoured backfill should be restored with appropriate native habitats based on the constructed soil conditions, aspect and landscape position in order to stabilize the soils. Habitat restoration of the cleanup areas in Area IV and NBZ would buffer the existing and restored sensitive plant populations at the site. In our experience, a defined, well-managed restoration plan and implementation can successfully reestablish native habitat over time that supports not only sensitive plants and plant communities but also wildlife.

Properly managed restoration will prevent the establishment of invasive weed species on the bare backfill soil and provide ecological integrity to the site. In order to prevent competition in the virgin backfill material from invasive species that already exist on site, such as fountain grass (*Pennisetum setaceum*), should be eradicated from Area IV and NBZ, as well as any adjoining potential source populations, prior the general native habitat restoration and the re-introduction of the sensitive species.

Note, backfill soil should be selected that is weed free, and could potentially include soil salvage from native areas scheduled for development. If the backfill soil contains weed seed material, then before installing native seed material, a weed management program must be performed successfully to ensure that the near-surface weed seed is effectively managed prior to seeding. With natural rainfall, multiple years of grow-and-kill may be required to deplete the near surface soil weed seed bank in the backfill. Horticultural visual observations of weed germination rates in the growing season prior to control, in any year with an average to above average rainfall winter season, should be used to determine the status of weed management at the site prior to seeding. Failure to adequately control the weed seed bank prior to seeding may result in unnecessary and significant costs for weed maintenance post-seeding.

Plant lists for revegetation should consist of early successional and seral shrub species typical of the surrounding chaparral and California sage vegetation communities. In our experience, revegetation would be best achieved by seeding the site where possible, as it is more cost effective and establishes higher quality and diverse plant communities than container planting-focused methods. Relying on seeding, rather than using container planting, will ensure the native plant species will develop in their preferred microclimate within the revegetation and restoration areas.

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,

LAND IQ

The diverse seed mix should be designed to mimic the native habitat's response to a natural or historic disturbance regime (e.g. fire or grazing pressure from a large mammal) developing over time from fast germinating and growing annuals to shrubs. Relying upon natural rainfall for establishment, a subshrub dominated community, typical of a local mature California sage scrub vegetation community is expected to establish in approximately five to seven years. The exact timing of the development of the subshrub canopy will depend on each year's growing conditions, which are predominately determined by rainfall events, temperature and humidity in the winter and spring.

Not only will the use of a diverse seed mix promote the development of appropriate native habitat in the revegetated areas, but will provided sufficient native flowering annual and perennial plants to attract pollinators to areas that are selected for seeding and/or transplantation of the two sensitive plant species, Braunton's milk-vetch and Santa Susana tarplant. A recent Boeing-funded study to test revegetation methods at SSFL found more pollinators using areas seeded with a more diverse native seed mix (Galea and Wojcik 2017).

The seed mix should be sufficiently diverse and installed at sufficient pure live seed rates to ensure successful establishment. The timing and technique of seeding is important for success and to avoid the need for re-seeding areas. All seeding must be accomplished in the early fall before onset of winter rains. Therefore, to have enough seed for the project, seed collection for general revegetation must be implemented for several years within the local bioregion in similar habitats, but not restricted unnecessarily to the populations within Area IV and the NBZ. Widening the collection area will increase the potential for increasing the genetic diversity and fitness of the seed mix, as well as allowing for the collection of a sufficiently diverse species mix of early successional species that may not all be immediately available within the project area, since the site was last disturbed in the 2005 Topanga wildfire.

A number of seeding methods are available for the varied conditions over the site. Each seeding method has been successfully used to establish and restore native habitat. In the backfill areas, imprint seeding may be most appropriate, depending on the final topography. In the adjacent disturbed areas without significant soil disturbance and no backfill soil placement, drill seeding or hydroseeding methods may work best, depending on the depth of the soil. The point is that there are many alternative methods that can be employed to seed restoration sites such as the SSFL.

Natural rainfall is sufficient to establish the seed mix over multiple growing season but may require up to ten years to achieve a target seral subshrub community composition and cover. The development of longer-lived perennial species typical of the surrounding chaparral vegetation communities will likely take at least five to 10 years based on the results of other restoration projects in southern California. It will be necessary to manage the site for weeds following seeding of the general revegetation areas, with maintenance weeding expected in the first three years. An adaptive monitoring and management program should be used to determine if weeding

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,

LAND IQ

events are necessary to prevent the establishment of invasive weeds or significant cover of non-native plants within any portion of the site.

It should be noted that no herbicide should be used in the first growing season following seeding and only targeted applications of herbicide should be used in following years; hand weeding and weeding methods that do not disturb the soil surface or native seedlings are required when seeding with native species (e.g. no weed eaters or mowers).

Discrete nodes of select transplanted material, as discussed previously for sensitive species, have been used in successful restoration projects, but these container plants generally require irrigation using a temporary above-ground irrigation system. After the transplanted material has successfully established in a irrigated node (e.g. following one year from the end of winter rains to the beginning of the following winter rain season, or as needed), the irrigation should be turned off in subsequent years to allow the native vegetation to develop with natural rainfall

In summary, with comprehensive restoration plans in place in advance of soil cleanup of Area IV and NBZ, we have a high level of confidence that the unavoidable impacts to Braunton's milk-vetch and Santa Susana tarplant from cleanup to AOC standards can be mitigated to a less than significant level.

Land IQ has been retained by the Committee to Bridge the Gap to review the mitigation potential of Braunton's milk-vetch and Santa Susana tarplant in the Area IV and NBZ cleanup areas.

Respectfully,



Travis Brooks
Restoration Ecologist
tbrooks@landiq.com



130-2
cont'd

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,

LAND IQ

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Commenter No. 130 (cont'd): Travis Brooks, Restoration Ecologist,
LAND IQ



Firm Description

Land IQ has a multi-disciplinary team of ecologists and biologists, environmental planners, soil scientists, agronomists, remote sensing and GIS specialists with offices in Sacramento and Los Angeles. Our Los Angeles Office (formerly known as Earthworks Restoration, Inc. and NewFields AER, LLC) is expert in native plant ecology, habitat assessment and restoration, management of conservation lands for habitat value, biological resource monitoring and environmental and mitigation planning. We have a depth of experience in revegetation and reclamation of drastically disturbed landscapes, detailed habitat evaluation, soil mapping, and exotic species assessment and management. We have managed, prepared resource management plans and restored habitat over more than 15,000 acres and on dozens of projects in Ventura, Los Angeles, Orange and San Diego Counties. Our expertise includes knowledge and planning for native plant seed collection, storage and use as an effective and cost saving method for habitat restoration.

Mr. Travis Brooks, Restoration Ecologist for Land IQ, has over sixteen years of experience in restoring habitat in southern California, including for sensitive species, and graduate studies in Ecology and Evolutionary Biology at the University of California, Los Angeles (PhD Candidate 2010). His recent and on-going projects include the following:

- Development of Best Management Practices for Grassland and Forbland Habitat Restoration, including for Quino Checkerspot Butterfly (*Euphydryas editha quino*, federally endangered) habitat and Otay Tarplant (*Deinandra conjugens*, federally threatened and state endangered) habitat, for the San Diego Association of Governments (SANDAG).
- Update of the Habitat Restoration Plan for the Central/Coastal Orange County NCCP/HCP Habitat Reserve (more than 37,000 acres) for the Natural Communities Coalition.
- Brooks, T. M. Griswold, B. V. Brown, J. P. Dines, K. L. Garrett, M. Ordeñana, G. B. Pauly, T. Longcore, and K. Sloniowski. Chapter 5: Habitat Enhancement Opportunities. Pp. 5-1 to 5-16 in *Water Supply and Habitat Resiliency for a Future Los Angeles River: Site-Specific Natural Enhancement Opportunities Informed by River Flow and Watershed-Wide Action: Los Feliz to Taylor Yard*. The Nature Conservancy, Urban Conservation Program, Los Angeles (December 2016).

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**Commenter No. 131: Congresswoman Julia Brownley,
Member of Congress, House of Representatives**

JULIA BROWNLEY
28th District, California
Member of Congress
<http://juliabrownley.house.gov>



Congress of the United States

House of Representatives

Washington, DC 20515-0526

April 13, 2017

COMMITTEE ON VETERANS' AFFAIRS
RANKING MEMBER, SUBCOMMITTEE ON HEALTH
SUBCOMMITTEE ON DISABILITY ASSISTANCE
AND MEMORIAL AFFAIRS

SUBCOMMITTEE ON AVIATION
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

SUBCOMMITTEE ON COAST GUARD AND
MARITIME TRANSPORTATION

SUBCOMMITTEE ON
HIGHWAYS AND TRAFFIC

The Honorable Rick Perry
Secretary
U.S. Department of Energy
Forrestal Building, Room 7B138
1000 Independence Avenue SW
Washington, DC 20585-0001

Dear Secretary Perry:

I write to comment on the U.S. Department of Energy Draft Environmental Impact Statement (DEIS) for the clean-up of the Santa Susana Field Laboratory (SSFL).

As you know, the SSFL is located along the Los Angeles/Ventura County border. Initially far from population centers, SSFL was the site of rocket engine testing and nuclear experimentation. It is undisputed that toxic chemicals were used, spilled, and negligently dumped at SSFL. Additionally, in the early 1950s, an uncontained sodium reactor at the SSFL experienced a partial nuclear meltdown.

A full clean-up of the SSFL is of critical importance to me, as well as to my constituents. The 2007 Consent Order and 2010 Administrative Order on Consent (AOC) were entered into with the State of California to ensure a full clean-up is performed by the responsible parties and it is my expectation that DOE will not only live up to its responsibilities under the AOC, but that no alternatives or exemptions inconsistent with the AOC will be pursued by DOE.

It is imperative that we get this right so that we eliminate the significant health and safety risks for people who will continue to live nearby, and those who will be using the site in future years. Any clean-up less than to background levels will leave both radioactive and chemical contamination in place regardless of the end use of the property.

Please ensure that these comments be entered into the public record.

Sincerely,

JULIA BROWNLEY
Member of Congress

cc:
Ms. Stephanie Jennings, NEPA Document Manager SSFL Area IV, U.S. Department of Energy
The Honorable Barbara Lee, Director, California Department of Toxic Substances Control
The Honorable Matt Rodriguez, Secretary, California Environmental Protection Agency

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131-1

131-1 DOE acknowledges your concern about complete cleanup of SSFL consistent with the 2007 Consent Order and the 2010 AOC. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

With respect to the alternatives evaluated in this Final EIS, NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. Section 6.2 of the AOC recognizes that, absent relief from the court's order, an environmental review that meets the requirements of the Court order (i.e., a Final Environmental Impact Statement and Record of Decision) would be required, as well as any necessary modifications of the AOC. Also, in accordance with the 2010 AOC, Section 7.11, "Compliance with Applicable Laws and Regulations," all actions taken by DOE pursuant to the order will be undertaken in accordance with applicable local, State, and Federal laws and regulations. Accordingly, under this section as well, DOE must comply with NEPA.

This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, this EIS also analyzed alternatives that determine cleanup levels by considering risk to human health, ecological risks, and the protection of natural resources. This use of a risk assessment approach for soil clean up, is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. Note that DTSC is preparing an environmental impact report under CEQA that also analyzes alternatives for the cleanup of Area IV and the NBZ, as well as those portions

**Commenter No. 131 (cont'd): Congresswoman Julia Brownley,
Member of Congress, House of Representatives**

of SSFL which are the responsibilities of NASA and Boeing. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in September of 2017 (DTSC 2017b).

Much of the contamination that previously existed at SSFL Area IV and the NBZ has been removed. Over the operation history of the site, there have been 272 numbered structures in Area IV. As the missions for the buildings ended, they were decontaminated and removed. Today only 22 structures, 18 DOE-owned and 4 Boeing-owned, remain within Area IV. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, “Offsite Impacts” of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA’s soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC’s review of the data (included as part of DTSC’s broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act (Also see Chapter 3, Figure 3–19 of this EIS).

Commenter No. 132: Maria Caine

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Dept. of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Ms. Jennings,

I am outraged and extremely disappointed that DOE has released this draft Environmental Impact Statement (EIS). In 2010, DOE set an amazing precedent for environmental cleanup by signing the Administrative Order on Consent (AOC) and committing to a full cleanup of the Santa Susana Field Laboratory. Now, you are going back on all of that progress by failing to keep your promise on time and taking it even further by lying and proposing alternatives in your draft EIS that you do not have the authority to make. Your proposals in the DEIS are not only detrimental to human and environmental health, but they are illegal, as the binding contract you signed in 2010 states you must cleanup to the AOC Look Up Table (LUT) values. In 2012, DOE acknowledged this in its notice of "Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement," when it promised only to consider ways on how to achieve this cleanup, not whether or not to do so. The draft EIS is flawed in that it 1) violates the AOC by proposing alternatives to AOC LUT values, 2) claims exemptions outlined in the AOC that do not actually apply to the site, 3) grossly overestimates the amount of soil that would need to be taken from the site in an attempt to scare locals into supporting their illegal alternatives, 4) falsely claims soil would be difficult to replace as there are no AOC compliant fills when in fact, there are, and 5) proposes an alternative to leave groundwater contamination at the site for over a century.

The AOC LUT values were set and agreed upon when the contract was signed in 2010. These values are the standards to which SSFL is to be cleaned up. In the draft EIS, DOE proposes new values for chemical cleanup in appendices D, G, and J. When comparing the draft EIS proposed values with the LUT values, 42 chemicals have new cleanup proposals that are

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132-1 Evaluating alternatives for remediation of SSFL Area IV and the NBZ does not violate the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Sections 2.2, "Compliance with the 2010 Administrative Order on Consent"). The risk-based approach is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Regarding exemptions under the 2010 AOC, see Chapter 2, Section 2.3, of this Final EIS, as well as Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD.

The volumes in the Draft EIS have a sound engineering basis. DOE used the GIS (geographic information system) database for Area IV to identify on a point-by-point basis, any sample location that had an exceedance of a LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, develop areas and depth of exceedances, and then the calculation of the soil volume exceeding the LUT values. The volumes were independently reviewed by a separate team that validated the calculations. Since the Draft EIS was prepared, DOE has independently checked the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values.

Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for information on how the soil volume was estimated and discussion of issues related to acquiring acceptable backfill soil.

Regarding remediation of groundwater and risks associated with monitored natural attenuation, refer to Chapter 2, Figure 2-11 of this Final EIS, which shows the extent of the groundwater plumes in Area IV and the NBZ. Also as stated in Chapter 3,

Commenter No. 132 (cont'd): Maria Caine

over 100 times greater than those in the LUT. Of those 42 chemicals, 30 are over 1,000 times greater. Of those 30, 20 are over 10,000 times greater. Of those 20, 16 are over 100,000 times greater. Of those 16, 7 are over 1,000,000 times greater. DOE justifies these unreasonably high values by claiming they are safe, suburban residential values taken from the Standardized Risk Assessment Methodology (SRAM). In truth, these values are for suburban residences without garden, and are far more lax than would be allowed if the DOE could use risk values from the SRAM. To make matters worse, the EIS states in chapter 2, page 2-31 that "If any one of the constituents were to exceed its respective revised LUT value, DOE would make a decision to remediate the area represented by the sample" (emphasis added). Again, the DOE cannot and should not be using any values, other than those from the AOC LUT. Furthermore, DOE attempts to justify its alternative LUT values by claiming other sites in California, such as the McClellan Air Force Base, are using similar standards. This however, is not entirely accurate. While it is true that the cleanup standards employed at McClellan and the DOE alternative values are both risk based, McClellan clearly acknowledges that it is being cleaned up to Industrial/Commercial standards. DOE claims its RBSL based alternatives are for suburban residential use, and yet the site it compares itself to would ban and residential use or any high risk uses such as daycares, hospitals, or schools for people under the age of 18 under its cleanup standards.

DOE also attempts to avoid cleanup by claiming biological and cultural exemptions only technically allowed by the AOC. It is true that the AOC gives DOE some room to work around federally recognized endangered species and historical artifacts, but as of the release of this DEIS no areas on the site qualify for these exemptions. There are no federally recognized artifacts on area four, and only two plants (the Braunton Milk Vetch and the Santa Susana Tarplant) are on the federal or state endangered species list. For land to actually qualify for an exemption, the US Fish and Wildlife Services (USFWS) must issue a formal Biological Opinion on what areas should be exempt from remediation. No such Biological Opinion exists. If such a report did exist it would only mean that mitigations measures must be taken, not that DOE could choose to take no action.

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Section 3.4.3, of this EIS, the monitoring well network established for Area IV and the NBZ demonstrates that the contaminants have not moved laterally off of DOE-administered areas of Area IV and the NBZ. Sections 3.4 and 4.4 of this Final EIS includes additional information on groundwater that indicates that these plumes do not pose an offsite risk if allowed to naturally attenuate.

132-2 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLS based on an Onsite Suburban Residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

132-3 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. Exemptions for biological and cultural resources are provided for in the 2010 AOC. At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not

Commenter No. 132 (cont'd): Maria Caine

In a shameful attempt to scare locals out of supporting cleanup, DOE focuses much of its time on presentations and posters that greatly inflate the number of truck trips that would be needed to cleanup the site. If you attend any DOE public meeting, they will tell you all about how the trucks full of soil contaminated with dangerous chemicals and radioactivity will pass right through your neighborhood. What DOE fails to mention is that they didn't consider any alternatives to this method. There are routes that don't pass through as many residential areas. There are covered conveyor systems that can move soil easily to a local train station to be shipped away. These alternatives are both practical, and simple, with companies willing to assist in the construction of such conveyors a short internet search away (I was able to find three by googling, covered conveyor). There is no reason for the local community around SSFL to have to live in fear of a full cleanup. The only thing they should be concerned about is the amount of contamination left behind and the health of their families should DOE get out of doing the full cleanup like they promised.

Lastly, DOE falsely claims the contaminated soil they take away would be difficult to replace as there are no acceptable fills when in fact, there are. They claim in chapter 2, page 2-22, that, after an initial evaluation of three off-SSFL sources of soil for backfill and two bags of soil from home improvement stores, none met the requirements of the 2010 AOC. However, in appendix D page D-45, DOE admits that *Gillibrand* soil exceeds LUT values for only three chemicals, and then follows this statement by saying "none of these results is at a level that would pose a risk to human health." Furthermore, these three chemicals were *estimated* to be at a higher level than the AOC LUT values, they were not actually found to be so (Table D-8). Most importantly, the AOC acknowledges that, if a suitable fill that meets all LUT values cannot be found, DTSC will address the backfill requirements. So it is not up to DOE, in any way, to say that cleanup cannot be completed because they cannot find a suitable soil fill. This decision lies with DTSC and, as DOE admits, *Gillibrand* is a perfectly acceptable fill for human health and the environment.

As for its groundwater treatment alternatives, DOE has proposed two options, one of which is "monitored natural attenuation." The difference between its monitored natural

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yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on the application of the exemption process in Area IV and the NBZ. Additionally through formal and informal consultation with the State Historic Preservation Officer, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes, DOE has also identified areas in which it proposes to apply the exemption process for protection of cultural resources. This process is described in Final EIS Chapter 2, Section 2.3. The application of cultural resource exemptions requires the approval of the DTSC.

Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response. Please also refer to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about a full cleanup of the site.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives. In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

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The 2010 AOC requires all chemicals and radionuclides in backfill soil to be below their respective LUT values in order for the soil to be used in Area IV. As stated by the commenter, EIS Appendix D, Section D.6.2 presents soils test results for the Gillibrand facility in Simi Valley. These data show that soil samples would exceed LUT values for antimony, anthracene, and phenanthrene and the EIS states in Section D.6.2 that none of these results is at a level that would pose a risk to human health or the environment. Per the 2010 AOC, "If an onsite or offsite source of backfill soils that achieves all

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attenuation alternative and the no action alternative is the installation of a few additional monitoring wells to monitor the rate at which chemicals present in the water attenuate. Relying on natural attenuation is just a fancy way for DOE to get out of cleaning up their mess. One of the contaminants DOE plans to monitor for is strontium-90, which DOE admits on page S-47 of the EIS summary would take over 100 years.

I urge DOE to redo this EIS, and to properly follow the terms from the contract it signed in 2010. Everyday, people are being poisoned by the contamination left behind at SSFL, and DOE has the power and responsibility to change this. Please, follow through with your promise, set an example for other responsible parties, and cleanup the field lab.

Sincerely,
Maria Caine

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Look-Up Table values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill.” DOE will continue to work with the DTSC to identify a source of backfill prior to initiation of soil remediation activities. Refer to Section 2.3, “Suitable Backfill Soil,” of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source, including interactions with DTSC.

132-6 As described in Chapter 2, Section 2.6 of the Draft EIS, for the Groundwater Treatment Alternative DOE looked at a range of groundwater treatment technologies, not just monitored natural attenuation and no action. This range included pump and treat of contaminated groundwater, soil vapor extraction to remove sources, and excavation and removal of the strontium-90 source. The *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) was completed after the issuance of the Draft EIS. The text of this Final EIS was revised to incorporate information from this study that is relevant to groundwater treatment technologies for Area IV. As described in Chapter 2, Section 2.7 of this Final EIS, DOE’s preferred alternative for groundwater remediation is a combination of the Monitored Natural Attenuation Alternative and the Treatment Alternative. Under this alternative, monitored natural attenuation would be used for the two plumes with the lowest concentrations of TCE (Metals Clarifier plume and the RMHF plume) and for the tritium plume. Treatment of the remaining plumes will be in accordance with the results of the Corrective Measures Study. Source removal is the preferred alternative for the strontium-90 source.

132-7 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion of concerns about offsite impacts. DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities.

Commenter No. 133: Kaitlyn Del Valle

Ms. Stephanie Jennings, NEPA Documents
Manager SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley CA 93060

January 31, 2017

Dear Ms. Jennings:

Thank you for allowing me to comment on the Area IV EIS Draft. I have helped various environmental groups around the local area work on staying informed on any pollution or environmental issues relevant to the residents. Many people living around the Santa Susana Field Laboratory have been habitants of the San Fernando Valley for over 50 years. This area was once a large cattle farm as well as numerous orange orchards and many of the families have had ancestors pass down their current properties to them. Our interest in the Santa Susana Field Laboratory Cleanup is to ensure that future descendants can continue living comfortably in a healthy environment.

SSFL has the largest amount of contaminated material in one location in the state of California. This contamination has been in place for over five decades, consistently spreading via air and water towards residents of the surrounding neighborhoods and beyond. These toxic materials have been known to cause serious health issues to anyone exposed to them. Some of these issues include thyroid cancer and many more serious illnesses.

Originally, all agencies engaged in testing at the Santa Susana Field Laboratory agreed to the terms that they would all clean up any contaminated material 100% (including any background contaminants) with the State of California. DOE has been resistant to cleaning up their portion of the contamination in Area IV and has continually postponed the cleanup. This EIS is to examine the current state of Area IV and ensure that the surrounding habitats are not negatively affected by the past, present, and future actions being taken there.

This DEIS is very concerning to the local residents. If DOE will uphold their side of the agreement they made in 2010 to provide the most protective cleanup of the site—to background. The DEIS violates the 2010 Administrative Order on Consent (AOC) with every single one of its proposed cleanup alternatives. The AOC forbids “leave in place” cleanup methods, which the DOE is proposing, and the cleanup that was supposed to be finished by this year (2017) hasn’t even begun.

I strongly encourage DOE to keep to their 2010 agreement with the State of California on the cleanup of Area IV. This full cleanup to background will ensure that there is no more harm done to the residents living nearby as well as the local habitats found in the surround areas.

Sincerely,

Kaitlyn Del Valle

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133-1 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

133-2

133-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. Please refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

133-3

133-3 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” of this CRD.

Section 6.1 of the AOC recognizes DOE’s legal responsibility to prepare an EIS. With respect to the alternatives evaluated in this Final EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. The EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, the EIS also analyzed alternatives that determine cleanup levels by considering risk to human health and the environment and the protection of cultural and natural resources. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ.

Commenter No. 134: Erin Devitt

Ms. Stephanie Jennings
 NEPA Document Manager
 U.S. Department of Energy
 4100 Guardian Street, Suite 160
 Simi Valley, CA 93063

Dear Ms. Jennings:

I appreciate the opportunity to provide a comment to the Department of Energy in response to its draft Environmental Impact Statement (EIS) for the cleanup of Area IV and the northern buffer zone of the Santa Susana Field Laboratory (SSFL).

The Department of Energy engaged in extensive nuclear reactor development work that caused radioactive contamination of the site. This contamination was caused by nine nuclear accidents and the dumping of radioactive materials, among other sources, including a well-known partial nuclear meltdown. Other contamination includes heavy metals, solvents, PCBs, and perchlorate. The contamination is found in soil, structures, groundwater, and surface water. This contamination was caused by decades of bad practices ignoring environmental consequences. This site is one of the most severely contaminated sites in America and is next to one of the most highly populated areas in the world. The consequences of letting this contamination go on for so long are severe and must be addressed immediately.

In March 2003, the DOE issued an Environmental Assessment (EA) instead of conducting a full EIS. The DOE found no significant impact in their EA and planned not to clean up the site. This was a mistake, and luckily the DOE was told to conduct a true EIS, as 500 hits of radioactive contamination above background were found in Area IV and the NBZ by a multi-million dollar study conducted by the EPA in 2012. Now under the Administrative Orders of Consent (AOC), entered into by NASA and DOE with the state of California, NASA and DOE are required to cleanup the site to background. These organizations now must fill the requirements of the legally-binding contract they signed.

The draft EIS contains several issues that should be amended. The main issue is that the DOE is looking at *whether* to cleanup their full mess, like they agreed, instead of honoring their commitment to a cleanup to background. There must be more health studies done about the workers at the site and the residents of the surrounding areas. The greater area already has reported higher levels of specific cancers, such as thyroid cancer. There is also statistically significant data to support pediatric cancer clusters in the surrounding area. Multiple children have lost their eyes and lives as a result of this cancer. Residents justly feel unsafe about living in the area. They suffer from multiple sources of contamination including in the air and in their water. Studies done by UCLA have concluded that there are higher cancer rates among nuclear workers at the site as well. There should be continued compensation for the suffering caused to residents and workers due to the contamination.

Most of the EIS is concerned with transporting the hazardous materials with trucks and is trying to paint the removal of the contamination as scarier and potentially more harmful than the contamination itself. This should not be the focus of the EIS. There have been trucks coming

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- 134-1 DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater; and intends to complete remediation of SSFL Area IV and the NBZ in compliance with applicable requirements (including regulations, orders, and agreements) for cleanup of radioactive and hazardous substances. Chapter 1, Section 1.3, contains a brief history of activities at SSFL, including previous cleanup efforts, and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV at SSFL can be found at <http://www.etec.energy.gov/>. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. This Final EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS will inform Federal decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste.
- 134-2 DOE prepared the EA in order to cleanup Area IV, not to avoid cleaning it up. The analysis in the EA was challenged and DOE is under court order from the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) to prepare an EIS. DOE may not transfer possession or otherwise relinquish control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision.
- 134-3 DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. The purpose of the EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 134 (cont'd): Erin Devitt

and going to the site for decades. Instead the focus should be the environmental damage that was already caused and specifically how it's going to be cleaned up. The EIS should also discuss the impacts that not cleaning up the site would have. It would be a grave mistake to ignore this problem any longer and should be addressed in this manner.

The EIS should go into more detail about the groundwater contamination. This is likely what will have the most effect on surrounding residents. More specific identification and extent of contamination is necessary.

Furthermore, pollution has been occurring for decades and should be addressed as such. The DOE should attempt to cleanup the area so that it is as close to its original condition as possible. They should take full responsibility for the contamination and the effects it has had on the surrounding community. A failure to amend the EIS in these ways will result in an incomplete cleanup that will not comply with the AOC.

Sincerely,

Erin Devitt

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- 134-4 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concern about dispersion of contamination from SSFL, as well as Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. Section 2.8 discusses the UCLA study referred to in the comment. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children in Los Angeles and Ventura Counties (CSP 2007). The study's authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.
- 134-5 Irrespective of past operations at Area IV, DOE needs to complete remediation of SSFL Area IV and the NBZ. DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. The EIS considers alternatives to accomplish these tasks, and, consistent with NEPA requirements, each alternative addresses the potential impacts that implementing the alternative could have on several resource areas, including traffic and transportation impacts, human health and safety, biological and cultural resources, ground and surface water resources, and air quality.
- 134-6 DOE acknowledges your concern regarding cleanup of the site and refers you to Section 2.1, "Preferences for Cleanup," of this CRD for further discussion of this topic of interest and DOE's response DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of the EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE

Commenter No. 134 (cont'd): Erin Devitt

is responsible, Area IV and the NBZ. It evaluates separate sets of alternatives for the three components of the cleanup project: soil remediation, building demolition, and groundwater remediation. The No Action Alternatives for soil remediation, building demolition, and groundwater remediation address the environmental impacts of not cleaning up the site).

- 134-7 DOE has performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS was updated with information from the draft groundwater remedial investigation report, including more information on the magnitude and extent of groundwater contamination in Area IV and the NBZ. The report is included as a reference for this Final EIS and is available for review on DOE's website. Also, please refer to the Topic of Interest, "Offsite Impacts" (Section 2.7 of this CRD) for a discussion of this topic and DOE's response.

Commenter No. 135: Ed Dudasik

From:
Ed Dudasik

Mar. 11, 2017

As a comment on the Draft EIS, I did not see consideration of alternative soil transport options such as the options described below. Please evaluate the options described below for feasibility, and, if feasible, update the EIS to incorporate these soil transport options:

First suggested alternative soil removal method:

This alternative method of removing the contaminated soil would greatly reduce or eliminate the impact of the SSFL soil removal on residents in West Hills, Simi, or Chatsworth. This alternative might actually result in lower total project cost:

- Construct a service tunnel, starting at a point in the northern area of the SSFL site. The tunnel would slope downward toward the north, and extend north about 1.5 miles to the existing railroad tracks. There is an existing railroad siding, near the point where Santa Ana Pass Road crosses the tracks. Or, any location near the existing rail tracks could be used. The service tunnel cross-section could be only 6 feet diameter. That is, a micro-tunnel.
 - At the point where the service tunnel meets the railroad tracks, in Simi Valley, a vertical shaft could be used to move soil containers up to the level of the railroad tracks. Containers could then be raised vertically & loaded onto flatcars on a railroad siding.
 - Back up at the main SSFL site, upgrade the roads on the site so trucks can transport the contaminated dirt north to the entrance of the service tunnel.
 - Load the contaminated dirt into shallow bins that can both fit through the service tunnel, and, can be crane-loaded onto rail cars at the railroad siding.
 - Transport the bins from the dig sites to the service tunnel entrance, then through the service tunnel, then crane-lift (or elevator) to waiting rail cars.
 - The dirt-filled, sealed bins could be transported via rail to the final soil deposit site. The bins would then need to be unloaded and recycled.
- At the SSFL site, mining engineers and tunneling consultants could advise on the best service tunnel location, tunnel size, construction method, shoring, tunnel flooding protection, throughput optimization, etc. Also, consulting is needed on the best

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135-1 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 135 (cont'd): Ed Dudasik

technology to use for transport of the dirt at SSFL (electric-powered mining shuttle cars? Conveyor system? Rail-mounted tramway?)

The dirt and rock removed during service tunnel construction might be usable as backfill at the SSFL site. At the end of the project, the service tunnel could be sealed off, and the access points restored to a natural state.

Second suggested alternative soil removal method:

This suggested alternative method is to use a surface-installed conveyor system, to transport soil over the top of the mountains between the SSFL site and the existing railroad siding in Simi Valley that is located about 500 feet east of the old Simi Valley Train Terminal.

The surface-installed conveyor could be either a roller-bed type conveyor, or a tramway-type conveyor.

If a roller-bed type conveyor is used, a bridge would be needed over the Santa Suzana Pass Road. And easements would be required to run the conveyor over the private property at the north end of the conveyor.

If a tramway-type conveyor is used, the tramway could be a series of small tram cars suspended from a cable system that runs over the mountaintops and then down the side of the mountain to get to the railroad siding at Simi Valley. Towers to support the tram system would be needed, but would probably not require building a new bridge.

Third suggested alternative soil removal method:

This suggested alternative method is to use mix the soil with water, creating a slurry that could then be piped out through a pipeline that would run over the mountains, or, through a tunnel, to get to the railroad siding. Slurries are currently used to move soil in the construction of micro-tunnels, such as tunnels for sewers. A slurry mix of 50% water and 50% soil would result in twice as much material to be removed by train, so this would be more expensive, but the lower cost of a pipeline, instead of a conveyor, might offset the higher slurry handling cost.

Ed Dudasik

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**Commenter No. 136: Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

*The physician and health advocate voice for a world free from nuclear threats
and a safe, healthy environment for all communities.*



April 13, 2017

Ms. Stephanie Jennings
NEPA Document Manager SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Comments on DOE's Draft DEIS for the Santa Susana Field Laboratory

Dear Ms. Jennings:

Physicians for Social Responsibility-Los Angeles (PSR-LA) is a physicians' organization dedicated to protecting public health from nuclear and environmental threats. We have been involved in efforts to clean up the Santa Susana Field Laboratory (SSFL) for over thirty years. In the late 1980s, PSR-LA joined with community members and other advocates to stop nuclear work at the site and to urge that radiological and chemical contamination be remediated in a manner that is fully protective of public health.

Decades of nuclear and aerospace activities, accidents, spills and releases have left SSFL highly contaminated with dangerous radionuclides including cesium-137, strontium-90, plutonium-239/240 and tritium and numerous hazardous chemicals. These toxic materials can cause cancers and leukemias, developmental disorders, genetic disorders, neurological disorders, immune system disorders, and more.

An extensive, multi-year epidemiological study by the UCLA School of Public Health found significant increases in death rates among the most exposed workers from cancers of the lung, lymph, and blood systems. A study for the U.S. Agency for Toxic Substances and Disease Registry (ASTDR), Professor Hal Morgenstern found rates for key cancers in members of the nearby public increased the closer the person lived to SSFL. In another study for ASTDR, Professor Yoram Cohen found evidence of toxic exposures to the offsite population in excess of EPA standards.

In addition, studies by cancer registries found elevated rates of bladder cancer associated with proximity to SSFL. A cluster of retinoblastoma cases, a rare eye cancer affecting young children, was identified within an area in the community that was downwind of the site. And the Public Health Institute's 2012 California Breast Cancer Mapping Project found that the rate of breast cancer is higher in Thousand Oaks, Simi Valley, Oak Park and Moorpark than in almost any other place in the state. Most recently, rare pediatric cancers have been identified by families who live near SSFL, causing tremendous concern.

PSR-LA | 617 S. Olive St. Ste. 200, Los Angeles, CA 90014 | phone 213-689-9170 | fax 213-689-9199 | email info@psr-la.org | www.psr-la.org

136-1 DOE disagrees with the assertion that Area IV and the NBZ are highly contaminated with radionuclides and chemicals. EPA did not confirm such during its radiological study of Area IV, only nine samples exceeded soil cleanup standards in effect at the time previous cleanup activities had been performed (HGL 2011). The soil chemical study conducted under DTSC's oversight (MWH 2007) identified localized areas with chemical contamination, but most locations exceeding LUT values did not contain chemicals above risk-based levels. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, as described in Section 2.7, "Offsite Impacts," of this CRD, there is no evidence of major amounts of contamination leaving Area IV. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007) Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. DOE acknowledges your concern about cancer and other illnesses in the public and SSFL workers. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

SSFL contamination migrates offsite. There have been over a hundred exceedances of pollution standards in runoff from the site reported to the LA Regional Water Quality Control Board. A TCE plume extends offsite. Perchlorate has been found in numerous wells in Simi Valley and in Dayton Creek in Dayton Canyon. Strontium-90 was found in Runkle Canyon. Other contamination has been found at Brandeis-Bardin and at Sage Ranch, where hundreds of cubic yards of toxic soil contaminated with antimony and asbestos were removed.

136-2

Given the harmful health impacts of SSFL contamination and multiple exposure pathways offsite, PSR-LA strongly supports the Administrative Order on Consent (AOC) that the Department of Energy (DOE) reached with the California Department of Toxic Substances Control (DTSC) in 2010 to cleanup to background levels of contamination.

136-3

Three years ago, PSR-LA submitted comments to DOE on its Public Scoping plan for the SSFL Environmental Impact Statement (EIS.) Our comments identified key issues to ensure that DOE's EIS would be compliant with the AOC. Over 400 members of the public also submitted comments asking DOE to ensure its EIS did not breach the AOC. (Figures provided in DOE's Final Scoping Summary Report are incorrect. The matter will be addressed further in these comments.)

136-4

Unfortunately, these comments were summarily ignored - every one of the proposed alternatives in DOE's DEIS violates the AOC and leaves high volumes of contamination on site. DOE instead produced an inaccurate and misleading EIS for SSFL that includes alternatives that leave between 34-99% of the nuclear and chemical contamination not cleaned up. DOE's DEIS also does not address health impacts of the contaminants at SSFL and offsite migration.

DOE's refusal to incorporate public scoping comments urging AOC compliance into its EIS is unfortunately not a surprise, given DOE's multiple efforts to frustrate public participation in the SSFL cleanup and lack of transparency.

All alternatives in DOE'S DEIS violate the AOC and pose risks to public health.

DOE has made repeated statements that it is committed to the AOC, including a public statement by SSFL Project Director John Jones at the February 5, 2014 SSFL Work Group meeting in which he called the AOC cleanup "the right thing to do," and more recent a statement he made to the *Ventura County Star* on February 18, 2017:

But in an interview with *The Star*, John Jones, director of the department's Energy Technology Engineering Center, said the agency's "proposed action is the AOC, which is to clean up to background." In layman's terms, "to background" means to restore the site to the condition it was in before the contamination occurred.

"I don't understand how (critics) make those statements," he said. "It's just sad when I hear that. We would like to sit them down and kind of make sure they understand it. But all three actionable (plans) are protective of human health and the environment. It's what we do at the department's Office of Environmental Management."

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136-2 As described in Section 2.7, "Offsite Impacts," of this CRD, there is no evidence of major amounts of soil or groundwater contamination leaving Area IV. The contaminant migration assertions in the comment apply to releases from Areas I and II (NASA and Boeing have responsibility for the cleanup of these areas). As indicated in Chapter 3, Section 3.4.3, of this EIS the monitoring well network established for Area IV and the NBZ demonstrates that the contaminants have not moved laterally off of DOE-administered areas of Area IV and the NBZ (Groundwater plumes extend from Area IV into the NBZ but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.) The scope of this Final EIS is limited to cleanup of DOE's portions of SSFL Area IV and the NBZ. Issues related to NASA and Boeing's activities in Areas I and II, are outside the scope of this EIS and are only considered as part of cumulative impacts. (Please see Chapter 5 of the EIS.) Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities, is being evaluated by the DTSC; a *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (Draft Program EIR) issued by DTSC in 2017 (DTSC 2017b).

The statement regarding violation of surface water discharge limits is general and without any detail regarding sources from Area IV. As discussed in Section 2.7, "Offsite Impacts," of this CRD, in recent years there have been few exceedances of permit limits at the outfalls associated with Area IV.

136-3 DOE acknowledges your concern about the health effects of contamination and your support for the 2010 AOC. It is DOE's mission to cleanup contamination at SSFL to levels that are protective of human health and the environment. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

136-4 DOE has changed Chapter 1, Section 1.10.2 of this Final the EIS to reflect the corrected number of commenters that provided scoping comments, acknowledging the information contained in this comment. DOE refers the commenter to the CEQ statement that commenting is not a form of voting on an alternative (CEQ 2007). Similarly, the number of comments received stating a preference for including or excluding material from this Final EIS does not dictate the scope of DOE's analysis.

DOE acknowledges your preference for meeting the EIS to be compliant with the 2010 AOC. The "Cleanup to AOC Look-Up Table Values Alternative" incorporates all of the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels determined by laboratory capabilities. None of the alternatives would leave "high volumes of contamination" within Area IV. Although the alternatives would leave differing volumes of soil, the soil would contain

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

Jones' statement begs credulity at every level. If DOE were concerned with protecting public health, it would have cleaned up SSFL decades ago. Not one alternative in its DEIS meets the AOC and all pose risks to human health. DOE's DEIS repeated states that it has no preference for which cleanup alternative is selected, and concedes that modification of the AOC is necessary in order for any alternative to be consistent with it. Further, the collective experience of communities impacted by contaminated DOE sites throughout the country is that DOE's Office of Environmental Management decidedly does not work to protect public health, as Jones states, but rather it works to avoid cleaning up dangerous contamination however it can. At SSFL, the tactics that DOE has employed to avoid cleanup are particularly egregious.

DOE's bias toward avoiding cleaning up SSFL is present throughout the DEIS and was vividly apparent at the public hearings it held on February 18 and 21, 2017. DOE chose to characterize the entire cleanup options in terms of trucks required to remove the contaminated soil, outraging many community members. Comments made at both meetings supported the AOC by a 3 to 1 ratio. DOE's "Table S-4 Remediation Soil Quantities and Truck Traffic by Alternative" angered the community, but does make it easy- however inadvertently - to calculate exactly how much contamination each alternative leaves behind.

The "Cleanup to AOC LUT Values Alternative" that DOE claims is compliant with the AOC in fact excludes 480,000 cubic yards of soil that DOE states is contaminated, which DOE estimates is 1,413,000 cubic yards. DOE preemptively exempt 330,000 cubic yards as *potentially* subject to proposed biological and cultural exemptions per the 2010 AOC, and another 150,000 cubic yards as PAH-contaminated soil *potentially* subject to natural attenuation. DOE deducts this total of 480,000 cubic yards, leaving 933,000 cubic yards - meaning about 34% will not get cleaned up. DOE also states that up to 5% of total soil volume may also be exempted, so up to 39% of contaminated soil could not be cleaned up in this option.

The justifications DOE puts forth for preemptively excluding this 480,000 cubic yards are invalid. According to the AOC, the biological and cultural exception can be considered only if the U.S. Fish and Wildlife Service, "issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site." But no such Biological Opinion was issued. Natural attenuation is also a specious argument for not cleaning up. DOE estimates that it could take 70 years for Total Petroleum Hydrocarbons or TPHs to attenuate, but cites a report that refers to another report which states that it could be longer if at all.

DOE's "Cleanup to Revised LUT Values Alternative" would cleanup just 192,000 of the 1,413,000 cubic yards of contaminated soil, leave between 86% in place or 91% if the 5% exemption is employed. DOE claims that this option utilizes suburban residential standards, but it has manipulated that standard to be 100 - 1,000 times more lax than the true EPA suburban residential standard. This most certainly is not protective of health. DOE had no business including any risk-based estimates, because the AOC agreement is to clean up to background. Even so, EPA guidance states that the cleanup standard should be derived from local zoning, which at SSFL is agricultural.

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136-8

136-9

concentrations similar to those EPA would leave at CERCLA sites and DTSC would leave at sites in California. DOE did consider public scoping comments in developing the Draft EIS. DOE considered all comments, not just those of select groups. While your stated preference includes meeting the technical elements of the AOC, some commenters requested that DOE evaluate a risk-based alternative in the EIS. The EIS analyzed alternatives that would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. The Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would reduce (1) risk to the public and the environment and (2) the potential of impacting visual, biological, cultural, and water resources compared to the Cleanup to AOC Look-Up Table Values Alternative. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. For further discussion please refer to Sections 2.1, "Preferences for Cleanup," and 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.

Addressing comments regarding evaluation of health impacts, in this Final EIS, DOE has added quantitative analysis of potential impacts of each soil remediation alternative on onsite and offsite receptors (refer to Chapter 4, Section 4.9 of this EIS). The analysis shows that impacts to a hypothetical onsite resident or recreational user following remediation would be within the risk range of 1 in 10,000 to 1 in 1 million. Impacts on offsite receptors during remediation would be orders of magnitude below the 1 in 1 million risk range.

136-5

The commenter is incorrect in the statement that "Not one alternative in its DEIS meets the AOC and all pose risks to human health." The Cleanup to AOC LUT Alternative incorporates technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. The Revised LUT Alternative incorporates the technical elements with the exception that soil risk-based screening levels (RBSLs) for chemicals are substituted for background values. All action alternatives would remove soil above risk-based levels. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE names its weakest alternative the “Natural Resources Conservation Alternative” in an obvious attempt to greenwash an option that would clean up only 148,000 cubic yards of the 1,413,000 cubic yards of contaminated soil, leaving between 91-99% not cleaned up. DOE proposes a standard of 25 millirem per year, which is emphatically not protective of public health per EPA Superfund guidance. This is the equivalent of a medically unnecessary chest X-ray every month of one’s life. The option also involves averaging contaminated areas with cleaner ones, rather than cleaning up anything over the cleanup level, which is also barred by EPA guidance.

136-9
cont'd

It bears mentioning again here that the radiological and chemical contaminants that DOE wants to walk away from are extremely hazardous, capable of migrating and causing cancers and other illnesses to the offsite population and future site visitors as well. The communities near SSFL have already endured decades of potential exposure to SSFL contamination – it is simply unconscionable for DOE to attempt to sentence them to decades more.

136-10

DOE attempts to prevent and frustrate public participation, especially from community members and organizations who support the AOC cleanup commitments

DOE’s DEIS states that it considered comments received during the 2014 public scoping period, during which it states that it received 1,272 comments from 309 commenters. The Final Scoping Summary report claims that of 309 commenters, 222 were emailed comments and notes that of these 125 were “form”. But the number of commenters was at least twice that many – PSR-LA solicited comments from our members and provided technical assistance to four other organizations to help them collect comments from their members, resulting in 427 comments. These comments were submitted to DOE at the email address it provided for comments, SSFL_DOE_EIS@emcbc.doe.gov. Please find attached both Excel files of the exported user information for the comments, and PDF documents compiling those comments.

136-4
cont'd

Why did DOE not include over 200 commenters who advocated for compliance with the AOC during its public scoping? We find the omission highly suspect given DOE’s ongoing and demonstrable efforts to stifle public participation from those who support the AOC agreements. DOE’s DEIS says that it developed alternatives for the EIS based in part on scoping comments. It apparently chose selectively, ignoring the vast majority who demanded DOE uphold the AOC and giving undue weight to the much smaller number who oppose it. DOE also does not tabulate how many comments demanded it comply with the AOC, which it should do with in its response to comments for its DEIS.

DOE aggressively worked to suppress participation from AOC supporters for its DEIS, providing only a comment form on its website with an 8,000 character limit. When PSR-LA asked DOE for an email address so that we could send more technical comments and supporting materials, DOE responded that we should submit comments in writing to via standard postal mail to Stephanie Jennings. PSR-LA protested again, this time copying representatives of Congresswoman Brownley, stating that it was unfair for DOE to ask the public to review thousands of pages yet only respond with few words on a web form and no attachments. DOE responded by changing the web form to allow for uploaded documents, but again refused to provide an email address. (A copy of this email exchange is attached.)

136-11

by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Based on the future land use of this area as open space, the constituents that would be left on site are not “dangerous” as the commenter suggests. Each of the action alternatives evaluated would be protective of the health and safety of the public and the environment.

DOE’s overall message regarding the SSFL has remained consistent – DOE needs to remediate those portions of SSFL for which it is responsible in a manner that is protective of the environment and the health and safety of the public and workers. The statements noted by the commenter do not change DOE’s responsibility for complying with agreements, as well as with other requirements such as regulations and orders. DOE’s understanding of the implementability of a cleanup in accordance with the 2010 AOC has evolved since 2012. As discussed in Chapter 2, Section 2.3, of this Final EIS, DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under the NEPA, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the environment and the health and safety of the public and workers. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this EIS.

136-6

Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for a description of how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values). Contaminants in the soil that would not be removed based on exemption and natural attenuation considerations would be at levels below human health and ecological risk-based levels based on the same risk assessment processes used by EPA at CERCLA sites and DTSC at sites throughout California. In the EIS, DOE has not proposed leaving 5 percent of the soil volume, but acknowledges that there is a provision in the 2010 AOC that allows, with DTSC oversight and approval, exemptions for unforeseen circumstances, but only to the extent that the cleanup cannot be achieved through technologically feasible measures.

136-7

DOE notes that the process developed for application of the exemptions was undertaken to comply with the AOC and to comply with Federal and State law, as required by the AOC. The application of the exemption process was based on several years of ongoing discussions with USFWS and CDFWS, with DTSCs involvement (see Appendix E, Table E-4 of this EIS). USFWS and CDFW provided in letters to

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE's lack of transparency was on display again, when community members noticed that its DEIS referred to dozens of missing documents. The website stated that in order to review documents (which it claims it did not post due copyright issues,) the public should contact DOE via email at SSFL_DOE_EIS@emcbe.doe.gov. This is the same email address it used to accept scoping documents in 2014. Complaints about the missing documents were sent to the email address that DOE provided, and the email address was disabled and all mention of it removed from DOE's website. This action prevented the public from being able to view the missing documents or contact DOE via email.

136-12

What possible reason could DOE have for trying to frustrate public participation except to prevent the public – which overwhelming supports the AOCs as demonstrated in the 3,700 comments received in support of them, with only a handful opposed - from weighing in? DOE should do whatever it can to make public participation on the clean up of radiological and chemical contamination from one of the most contaminated sites in California as easy as possible, not more difficult. People who live near SSFL and are most impacted by its contamination have a right to be heard. DOE should not be putting up roadblocks for them at every turn in the public comment process.

136-4
cont'd

Given DOE's decades of resistance to cleaning up SSFL, its efforts to stymie participation from cleanup supporters, and resulting loss of public confidence, PSR-LA has again obtained comments from our members and provided assistance to other groups for DOE's DEIS, using the DOE email address for Stephanie Jennings. If it is permissible to send physical mail to Ms. Jennings it must be permissible to send email comments to her as well. Because DOE has been so obstructive regarding comment submission, we are also mailing in copies of all the emails sent. PSR-LA demands a proper tabulation in DOE's response to comments for both the number of commenters and nature of their comments.

DOE also refused a request for members of the public to be able to present some slides with their testimony at the DEIS public hearings in February, stating that request was inconsistent with DOE's public notices related to the hearing process. Yet DOE's notices related to the hearing did not mention any prohibition regarding the use of slides with testimony. PSR-LA responded that there was no good rationale for declining except to impede critiques of DOE's breach of the AOC. (A copy of this email exchange is also attached.)

136-13

DOE has attempted to abrogate its cleanup commitments by secretly funding a front group to lobby against the AOC cleanup agreements.

Perhaps the most egregious example of DOE's attempts to unduly influence the amount and nature of public participation in the SSFL cleanup is its decision to secretly fund an "astroturf" or fake community group to lobby against the cleanup. Several members of the group, the SSFL CAG, have ties to the responsible parties, including one who is currently a consultant to DOE. In 2015, DOE gave the SSFL CAG a \$34,100 grant. CAG meeting minutes confirm that the donor requested anonymity, and that its leadership was so tight-lipped about the donor's identity that one CAG member resigned. According to public statements made by the group's Chair, the secrecy was requested in order to avoid scrutiny from Senator Barbara Boxer. Boxer is a

136-14

DOE their concurrence with the exemption process. Following issuance of the Draft EIS, USFWS provided its Biological Opinion stating the importance of following the exemption process for protection of endangered species. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response.

136-8 The 2010 AOC allows for onsite treatment of soils and natural attenuation was included as a treatment option at the suggestion of DTSC staff. The Draft EIS states that natural attenuation would be applied to soil with "low concentrations" of TPH's where they are the only chemical exceeding their LUT values. DOE is not considering natural attenuation for chemicals such as complex polycyclic aromatic hydrocarbons with a much longer time frame for degradation. Simpler polycyclic aromatic hydrocarbons, while not considered for treatment by natural attenuation in this Final EIS, may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans. See Chapter 2, Section 2.3.2, of this EIS for additional information.

136-9 For discussion of the estimated volumes of soil to be excavated, refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD. Refer to Section 2.1, "Preferences for Cleanup", of this CRD, for a description of why DOE considered alternatives to the Cleanup to AOC LUT Values Alternative. The RBSL concentrations used in the Draft EIS were not manipulated and were taken directly from the DTSC approved Standard Risk Assessment Manual (SRAM) developed for use at SSFL. They are consistent to what EPA would use at similar CERCLA sites. Risk assessments are developed using a most likely future use consideration. Zoning is one criterion used in identifying future land use, but it is not the overriding consideration. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NIBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site, and firmly establishes the basis for establishing cleanup levels based on use of the land as open space.

The Conservation of Natural Resources Alternative would result in the removal of all soil containing chemicals and radionuclides at concentrations posing a risk to human health and the environment in excess of levels requiring remediation. The soil not excavated would be similar to soil that EPA would not excavate at CERCLA sites or

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

longtime cleanup supporter who was instrumental in securing the AOC agreement.

DOE made this decision during the same time period that it reneged on its contract to fund the independently-administrated Community Involvement Fund (CIF) of the New Mexico Community Foundation (NMCF), which was established to increase public participation of communities near contaminated DOE sites throughout the country. DOE was supposed to stay out of funding decisions. According to the contract, "DOE-EM will ensure that the program is not viewed as a surrogate for DOE's own preferences, and that long-term DOE-EM decisions are based on input from individuals and/or groups who are most likely to be affected by those decisions."

In 2013, PSR-LA received a \$23,000 CIF grant to help it revive the SSFL Work Group, the long-standing public participation vehicle that had been previously funded by the EPA, and was declined support from DTSC. DOE reluctantly participated in the first meeting but made it clear it would not participate in further Work Group meetings. In 2014, DOE tried to pressure CIF against funding PSR-LA's reapplication. CIF resisted DOE's pressure and funded PSR-LA. Shortly thereafter, DOE broke its contract with CIF, causing over a dozen groups near DOE sites through the U.S. to lose vital funding for their public participation programs.

When the CAG finally revealed that DOE was its secret benefactor in August 2016, PSR-LA wrote to DOE Secretary Monica Regalbuto about the matter and asked for information regarding the nature of the grant and a copy of the grant contract. DOE's Frank Marcinowski responded only with a link to a search request on the USASpending.gov website confirming the grant. (See attached email exchange.) DOE refused to disclose information about its grant to the SSFL CAG, yet according to public statements by CAG members, DOE revealed information to the CAG about PSR-LA's CIF grant and budget! This outrageous conduct from DOE demonstrates both its hostility toward those who support the AOC cleanup agreement and its weighted preference for those who oppose it.

DOE's lack of transparency has enabled the CAG to misrepresent itself as an impartial, genuine community organization. Though the CAG revealed its DOE funding in one of its sparsely attended meetings, it does not otherwise publically disclose the source of its funding. CAG members have also worked to influence local neighborhood councils and elected officials to oppose full cleanup, never disclosing that they have been paid to do so by one of the parties responsible for polluting the site. It is not a surprise that the DOE-funded SSFL CAG has now submitted comments on DOE's DEIS that recommend the weakest cleanup alternative in DOE's DEIS, the "Conservation of Natural Resources" alternative that leaves up to 99% of the contamination on site.

DOE must not give undue attention to comments opposing the cleanup, however hard DOE and its CAG have worked to solicit them. DOE must not ignore or dismiss comments on its DEIS from those who want it to fully cleanup the contamination and uphold the AOC, including hundreds of local residents, elected officials, the Ventura and Los Angeles counties, and the City of Los Angeles. These commenters are, after all, only asking DOE to keep its own commitment that it made when it signed the AOC. DOE should revise its EIS to be fully compliant with the AOC, so that all contamination is cleaned up and communities near SSFL can rest assured that

136-14
cont'd

136-15

136-16

DTSC at comparable sites in California. DOE chose to identify the 25 millirem per year in its risk-based alternative for cleanup in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). DOE notes that the Conservation of Natural Resources Alternative (both scenarios) analysis in this Final EIS is a risk-based analysis and results in radiological risks in the 10⁻⁵ range; this would correspond to a dose much lower than 25 millirem per year. Please refer to Section 2.6, "Comparison of Radiation Doses," of this CRD for further discussion of the 25 millirem per year dose-based release criteria.

136-10 Please see Section 2.7, "Offsite Impacts," of this CRD, for a discussion of concerns about offsite impacts and DOE's response. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL (HGL 2012b; DTSC 2017a). The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007) Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. (see Chapter 3, Figure 3-19 of this EIS). Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

136-11 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the comment size limitations of the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

they will no longer be exposed to its harmful radiological and chemical contaminants.

Sincerely,



Denise Duffield
Associate Director

|| 136-16
cont'd

136-12 DOE apologizes for the problems encountered contacting DOE for references. For those references that were not appropriate to post on the SSFL Area IV EIS website (e.g., sensitive cultural resource information, copyrighted information) there was a note with contact information so a person interested in these documents could contact and coordinate with DOE to review them. On the SSFL Area IV EIS website, the note initially providing an email address was changed to provide a U.S. mail address and a phone number for questions regarding sensitive references. The email address was not intended for EIS comments, although members of the public began to attempt to send comments through that email address. The email address was then disabled to avoid confusion.

DOE recognizes that obtaining these references was more difficult than downloading the majority of the references, but DOE is legally required to protect copyrighted materials, sensitive cultural resource information, and any materials protected by client-attorney privilege. DOE notes that it received no inquiries requesting coordination so that the documents could be reviewed.

136-13 DOE's intent at the public hearings was to give all stakeholders equal time to orally present their concerns to DOE. Slide presentations were not allowed during the oral comment periods at the public hearings in order to give all commenters equal time; however presentations could be submitted by providing a printout of the presentation at the public hearing or by U.S. mail, or by uploading the presentation on the comment website.

136-14 While the comment is not on the scope or content of this Final EIS the following information is being provided.

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap, and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013. The grant to the CAG was funded through local project funds in an effort to support community engagement. DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards. Information on the SSFL CAG grant can be found here: <http://go.usa.gov/xWp7e>. DOE does not direct grantees on publicizing the receipt or source of grants. It was at the discretion of the CAG whether to publicize the grant.

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

From: Denise Duffield
Date: Mon, Jan 9, 2017 at 2:55 PM
Subject: Re: Question regarding comments on DOE SSFL DEIS
To: "Kramer, Debbie"
Cc: "Orgel,Cheri", Sharon Wagener

Hi Debbie,

Thank you for making that change. However, in the interest of maximizing public participation, I still find it unacceptable for DOE to not provide a simple email address for public comments. The web form not only creates an additional challenge for people to submit comments, it is also a serious impediment to accountability and transparency. Further, many longtime residents who live near SSFL and wish to weigh in are older, not terribly web proficient. An email address is by far the simplest for them.

What possible reason could DOE have for not providing an email address as it has in the past?

Denise

On Mon, Jan 9, 2017 at 12:32 PM, Kramer, Debbie wrote

Thank you for your suggestion, Denise. We have changed the EIS website: www.ssflarealveis.com to allow folks to upload documents and or attachments. If a commenter has a comment longer than 8000 characters, they can divide that comment into 2 parts, or upload the document to the website, mail it, or bring a written copy to one of the hearings.

We look forward to receiving all public comments.

Regards,

Debbie

From: Denise Duffield
Sent: Monday, January 09, 2017 9:19 AM
To: Kramer, Debbie
Cc: Orgel,Cheri; Sharon Wagener
Subject: Re: Question regarding comments on DOE SSFL DEIS

Debbie,

It is totally unacceptable for DOE not to provide an email address to submit comments on the draft EIS. It puts a significant additional burden on groups and individuals who want to submit more detailed comments and back-up documentation which are not possible to send via a web form. DOE previously, and all of the other agencies, have always allowed email comments. To not do so also contradicts DOE's supposed goals of being environmentally-friendly. It is not fair for DOE to upload hundreds upon hundreds of pages and attachments, electronically, for the public to review - but ask the public to only respond with a limited number of characters and no attachments electronically. Surely DOE is aware that this is a considerable obstacle to meaningful public participation.

Please provide an email address for submitting public comment on DOE's Draft EIS.

Denise

DOE's Office of Environmental Management started the Community Involvement Fund (CIF) to increase public involvement in the environmental management decision-making process and assist stakeholder groups with analyzing environmental management plans and proposals. The CIF operated from late 2010 until September 2015, and distributed a total of \$1.6 million through 46 grants to 23 recipients around the country, including groups involved in observing SSFL cleanup preparation. These included:

- \$46,800 in 2011 to the Committee to Bridge the Gap.
- \$55,000 in 2012 to the SSFL Advisory Panel, partnering with the Committee to Bridge the Gap. The SSFL Advisory Panel is not related to the SSFL CAG.
- \$23,000 in 2013 to Physicians for Social Responsibility – Los Angeles, partnering with the Rocketdyne Cleanup Coalition, Teens Against Toxins and Committee to Bridge the Gap.
- \$20,000 in 2014 to Physicians for Social Responsibility – Los Angeles, partnering with Teens Against Toxins and the SSFL Work Group, which is not related to the SSFL CAG.

136-15 DOE values the input of all those who commented on the Draft EIS and DOE considered all comments equally when developing this Final EIS. DOE has not solicited comments opposing cleanup of Area IV and the NBZ.

136-16 Please see the response to comment 136-4. DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information, including necessary steps prior to continuing cleanup. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007) Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. As described in Chapter 3, Section 3.4.3, of this EIS, the monitoring well network established for Area IV and the NBZ demonstrates that the contaminants have not moved laterally off of DOE-administered areas of Area IV and the NBZ (groundwater plumes extend from Area IV into the NBZ but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act).

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

On Mon, Jan 9, 2017 at 8:44 AM Kramer, Debbie wrote:

Good morning, Denise.
Please feel free to send your written comments via US Postal Service to:
Ms. Stephe Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063
Thank you so much.
Debbie

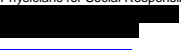
From: Denise Duffield
Sent: Sunday, January 08, 2017 11:40 AM
To: Kramer, Debbie
Subject: Question regarding comments on DOE SSFL DEIS

Hello Debbie,

Is there an email address that we can send our comments to? Physicians for Social Responsibility-Los Angeles - and other organizations I'm sure - would like to submit comments more technical in nature in a letter with some additional documentation.

That is not possible to do via a comment form such as DOE has provided.

Please let us know which email address we can use to submit longer comments.

Thank you,
Denise
--
Denise Duffield
Associate Director
Physicians for Social Responsibility-Los Angeles


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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

From: Denise Duffield
Date: Thu, Feb 16, 2017 at 6:15 PM
Subject: Re: Question re: Saturday SSFL hearing
To: "Jennings, Stephanie"

Stephie,

That is disappointing, yet seems part and parcel of DOE's efforts to frustrate the public's ability to meaningfully participate in the SSFL cleanup and DEIS comment process. There is not a word in DOE's notices related to the hearing process that prohibits the use of slides with one's testimony.

We are not asking for anything that others should not also have the opportunity for. There seems no good rationale for declining except to impede critiques of DOE's breach of the AOC.

I presume DOE will present its own PowerPoint on Saturday, giving to DOE, the entity breaking its cleanup obligations, a right not accorded to the public, for whom the public hearing is supposedly being held.

Denise

On Thu, Feb 16, 2017 at 1:26 PM, Jennings, Stephanie wrote:

Denise:

Your request is inconsistent with our notices related to the hearing process. In fairness to everyone who will be attending the hearing, we will not make an exception by allowing anyone to present slides.

If you would like to submit your slides as part of your comments, you are more than welcome to do that by uploading those slides to the website, or submitting hard copy either at the meeting, or via the U.S. mail.

Thanks for your understanding,

Stephie

From: Denise Duffield
Sent: Thursday, February 16, 2017 10:23 AM
To: Jennings, Stephanie
Subject: Question re: Saturday SSFL hearing

Hi Stephanie,

Will DOE have a PowerPoint projector at Saturday's hearing, and if so, may we bring some slides to show as part of our comments?

We'd bring our own laptop of course, or thumb drive if need be.

Thanks much,

Denise

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Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)

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Denise Duffield
Associate Director
Physicians for Social Responsibility-Los Angeles



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Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)

From: Denise Duffield
Date: Wed, Sep 7, 2016 at 10:37 AM
Subject: Inadequate and evasive response to DOE secret funding of SSFL CAG
To: "Marcinowski, Frank"
Cc: Marie Mason, Dawn Kowalski, Holly Huff

[Redacted]

Dear Mr. Marcinowski and Dr. Regalbuto,

This response that you forwarded to me and other community members does not come close to answering our questions.

DOE's possible posting of the CAG grant in Sept. 2015 (we have no way to verify when it was posted) on a web site that no one looks at, that contains no details on what the grant is actually for, what grant funds are to be expended on, is not in any way sufficiently transparent to the public, community members near SSFL, or elected officials who represent areas near SSFL.

Nor does it answer why the DOE explicitly asked the CAG to keep the gift anonymous, as repeatedly documented in CAG minutes and recordings of the CAG meetings.

Nor does it answer why the DOE is funding a group that explicitly opposes the cleanup agreement that it has signed and said it will uphold.

Nor have you provided a copy of the grant proposal or contract as requested. This is a government grant paid for by taxpayer money, the public and especially those living near SSFL have a right to see the grant proposal and grant contract.

You also have not answered why DOE claimed it had no funds to fulfill its commitment to the independently-administered New Mexico Community Foundation Community Involvement Fund, but clearly has plenty of money to give to a group of its choosing that is fighting the SSFL cleanup.

Below are the questions in my original email to Dr. Regalbuto. Please answer them as soon as possible.

Questions for the Department of Energy

1. Did DOE, as reflected in the CAG's minutes, suggest to the SSFL CAG to form a non-profit foundation so that it could provide funding to the CAG?
2. When did DOE begin discussing funding the CAG? When did it actually make the contribution, and what was the amount of the gift? Has there been more than one?

Response side of this page intentionally left blank.

**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

3. What is the stated purpose of the grant? What will/have grant funds be expended on?
 4. Under what category of funding was this grant made? Was it made from the DOE Office of Environmental Management, the same office that reneged on its commitment to NMCF?
 5. CAG member Alec Uzemek repeatedly stated that the grant had "no strings." Does the DOE grant have any restrictions? Is lobbying prohibited? Is the CAG required to submit a report on its activities? Will it be invited to reapply for funding again this year?
 6. Why did DOE request that its gift to the CAG be anonymous? Did the DOE tell the CAG, as expressed by Alec Uzemek, verbally or in writing, that it wanted its gift secret, at least for a time, because it wanted to avoid repercussions from Senator Barbara Boxer?
 7. How does the DOE reconcile public statements that it will uphold the AOC at the same time that it is funding a group that overtly works to destroy the AOC?
 8. Did DOE's animosity toward the Santa Susana cleanup agreement, and its displeasure at CIF funding PSR-LA and the SSFL Work Group, cause it to cancel the last year of its funding to NMCF, and thus cost over a dozen community groups throughout the United States to lose funding?
 9. Did DOE consult with elected officials historically concerned about SSFL cleanup as to whether the grant should be given to the CAG and whether it was a legitimate group representing the community? Why did DOE ignore the opposition to the CAG expressed, in writing, by the electeds?
 10. Why did DOE not publicly solicit grant applications instead of secretly arranging to give the money to the CAG? Why did DOE not solicit a grant application from the longstanding SSFL Work Group established by the electeds, which supports the cleanup agreements DOE is supposedly sworn to uphold? Given that very few people attend CAG meetings, and the Work Group meetings are often standing-room only, why did DOE secretly fund the CAG, without a competitive grant application process, and not solicit an application from SSFL the Work Group?
- Again, in addition, I request that DOE provide a copy of the SSFL CAG Foundation's grant application or proposal to DOE, as well as the DOE-SSFL CAG grant contract or agreement, immediately.

--
Denise Duffield
Associate Director
Physicians for Social Responsibility-Los Angeles
[REDACTED]

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

On Wed, Sep 7, 2016 at 10:00 AM, Marcinowski,
Frank wrote:
Dear Ms. Duffield:

Thank you for your email to Assistant Secretary Regalbuto regarding the Santa Susana Field Laboratory Community Advisory Group. I have been asked to respond.

DOE provided a grant to the state-authorized Santa Susana Field Laboratory Community Advisory Group and provided public notice of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards. Additional information on the SSFL CAG grant can be found at <http://go.usa.gov/xWpte>.

We value your input and the input of all stakeholders regarding EM's cleanup activities.

Sincerely,

Frank Marcinowski
Associate Principal Deputy Assistant Secretary for Regulatory and Policy Affairs

Sent with Good (www.good.com)

On Aug 29, 2016, at 12:57 PM, Denise Duffield wrote:

Dear Assistant Energy Secretary for Environmental Management Regalbuto:

I was shocked to learn recently that DOE has been funding a front group that is lobbying for the breach of DOE's cleanup agreement for the Santa Susana Field Laboratory (SSFL) - and that DOE had apparently requested that the funding be kept secret so that Senator Barbara Boxer wouldn't learn of it. I write today to both apprise you of this troubling situation and to request further information and documents related to DOE's decision to fund the SSFL CAG.

The SSFL CAG is a small but highly controversial group that is lobbying against the cleanup agreement (Administrative Order on Consent, or AOC) for SSFL signed by both DOE and the state regulatory agency overseeing the cleanup, the Department of Toxic Substances Control (DTSC). For example, one CAG flyer reads, "Why the AOC Cleanup at SSFL is Bad for Our Community" ([here](#).) "The AOC Cleanup: More Harm Than Good?" reads another ([here](#).) The CAG routinely propagates false information about SSFL's contamination, health impacts, and cleanup. A CAG - Community Advisory Group - should represent the community. However, the SSFL CAG does not even remotely represent the community, which understands that SSFL is contaminated with dangerous radionuclides and chemicals and needs to be fully remediated per the current DOE cleanup agreement. The CAG is a classic "astroturf" (i.e., fake grassroots) group dominated by people with ties to the parties responsible for the contamination at SSFL.

The public has been demanding to know for a long time how the CAG was funded and how it spends those funds. The CAG has refused to disclose that information, which is troubling for an entity that claims to be public. The community has suspected that the money comes from one or more of the entities that polluted the site and that is trying to

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

get out of its cleanup obligations, and that that is why the CAG wouldn't disclose the funding source or sources. Now it appears that that is indeed the case. For one of the Responsible Parties, DOE, to be funding a group that is trying to help DOE avoid its cleanup obligations, and asking for DOE's identity as the source of the funds to be long kept secret, would be nothing short of scandalous.

The DOE SSFL cleanup agreement (AOC) was proposed by former DOE Secretary Dr. Steven Chu and Assistant Secretary for Environmental Management (DOE-EM), Dr. Inez Triay. It was signed by DOE and DTSC in December 2010. The AOC stipulates that Area IV and the Northern Buffer Zone at SSFL are to be cleaned up to background. In February 2014, at a meeting of the SSFL Work Group, DOE SSFL Project Director John Jones told the audience of community members, elected officials, and media that the DOE was committed to upholding the AOC agreement (see video [here](#).)

Since then, the community has seen an erosion of DOE's stated commitment, including a Public Scoping plan which included numerous options that would violate the AOC (such as keeping waste on site), accompanied by a report grossly exaggerating soil removal estimates (see statement by the Southern California Federation of Scientists [here](#).) In addition, the AOC explicitly defines soils as including structures (see page five of AOC [here](#)), which are to be cleaned up to background and all wastes to go to licensed low level radioactive waste disposal sites, yet DOE is now taking the position that it can demolish nuclear structures at SSFL at will, using far less protective standards, and dispose of their radioactive wastes anywhere. The DOE has also apparently told the CAG that it is contemplating trying to modify the AOC to be required to perform much less cleanup than it had promised in order to save money (see CAG July 20, 2016 minutes [here](#).)

And now, we have learned that the DOE has been funding the CAG. The DOE is abundantly aware that the CAG openly, actively, and vigorously works to break the AOC cleanup agreement that DOE signed. DOE's funding of the SSFL CAG is therefore an alarming and direct assault on the AOC itself. It also makes clear that the CAG is an agent of one of the parties responsible for the pollution at the site and which is trying desperately to get out of its obligation to clean up all the radioactive and toxic mess that it made. The CAG regularly lobbies elected officials to try to persuade them to push to weaken the cleanup—an activity outside the scope of a regular community advisory group. It is very troubling for DOE, responsible for the contamination and sworn to uphold a cleanup agreement to clean it all up, to be secretly funding a group that lobbies elected officials to support DOE breaking its agreement.

We are also deeply disturbed by the secrecy surrounding DOE's grant to the SSFL CAG. The CAG first announced that it was to receive \$32,000 in funding at an August 2015 meeting, in which it stated that the donor wished to remain anonymous in order to avoid Senator Barbara Boxer, a longtime SSFL cleanup supporter, learning of the funding and taking action thereon. (See video of CAG meeting [here](#).) Only now, a year later, near the end of Senator Boxer's esteemed Senate career, has the CAG apparently been given permission to reveal that the identity of its funder is the DOE. It is outrageous and unconscionable for a government agency to make a financial contribution to any organization and request that the funding be kept secret, for any reason, let alone for the purpose of evading the attention of a United States Senator who would likely object to what it was doing. The CAG's August 2015 minutes ([here](#)) make it clear that the anonymity, which lasted a full year, was at the donor's request.

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
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Further, the DOE funded the CAG during the same year that it broke its commitment and revoked funding for the final year of a five-year commitment to the New Mexico Community Foundation (NMCF)-administered Community Involvement Fund (CIF), which funds independent groups in impacted communities near contaminated DOE sites throughout the country. The DOE's agreement with NMCF states, "By utilizing a cooperative agreement with an independent entity to distribute grant funds to qualified organizations representing the interests of the public, DOE-EM will ensure that the program is not viewed as a surrogate for DOE's own preferences, and that long-term DOE-EM decisions are based on input from individuals and/or groups who are most likely to be affected by those decisions."

In other words, DOE was supposed to stay out of the grant selection process to assure that groups funded were independent of DOE. However, the DOE weighed in heavily against a re-application submitted by Physicians for Social Responsibility-Los Angeles (PSR-LA) for the SSFL Work Group, the longstanding advisory group established a quarter of a century ago by the electeds and which represents the main mechanism for the community to learn about and provide feedback on the cleanup and hold the agencies accountable. In August 2013 we applied for and received a \$23,000 CIF grant. We re-applied in August 2014, but learned that DOE was pressuring CIF to deny the grant, which violated its commitment to keep hands-off the selection process. To its credit, in November 2014, the NMCF awarded the second grant of \$20,000 (and did not fund the SSFL CAG, which had also applied for the funding.)

Very shortly thereafter, the DOE reneged on the final \$300,000 it had pledged to NMCF, impacting not just PSR-LA and the SSFL Work Group but over a dozen communities nationwide. NMCF sent a message to its grantees on March 16, 2015 stating, "Earlier this year, representatives of the Department of Energy (DOE) advised New Mexico Community Foundation (NMCF) that the foundation would receive only partial funding for the CIF grant program in 2015. Last month, we were informed that NMCF would only be funded a small portion of the overall budget request solely for administrative oversight of the current 2014-15 grant cycle, and no funding would be allocated to go towards new grant-making. Adding to our confusion and concern, the decision-making process associated with the 2015 CIF appropriation has not been clearly communicated, nor have we been given a clear indication of the reasons for the reduction in funding."

We cannot say with certainty that DOE revoked funding to the NMCF due to its decision to fund the SSFL Work Group despite the inappropriate pressure by DOE. But, we must point this out as a strong possibility in light of the timing and DOE actions described herein. The CIF grant enabled the return of the trusted public participation vehicle, the SSFL Work Group, which attracted capacity crowds who were able to learn about the contamination that would be left on site if the cleanup agreements were not upheld. DOE had participated in the SSFL Work Group since its inception, but has now stopped attending virtually any public meeting where it could be held to account for its actions. Regardless of DOE's motivation to abrogate its agreement with NMCF, it is very troubling that the DOE made this decision while simultaneously funding an organization that opposes a cleanup agreement that the DOE has been strongly signaling it wants to break. DOE broke its commitment to provide its funding for community groups near contaminated sites through an independent mechanism and hands-off procedures that assured DOE would not do precisely what it has now done—fund a front group to lobby on DOE's behalf to get out of its cleanup obligations.

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

It is difficult to overstate just what is at stake for communities near SSFL right now. Decades of nuclear and aerospace activities at SSFL have left a legacy of dangerous nuclear and chemical contamination that continues to migrate from the site to offsite populations. Federal studies have shown an increase in cancers associated with proximity to the site. In 2010, after decades of attempts to achieve full cleanup, the historic AOCs were signed. As a result, \$41.5 million dollars were spent for a US EPA survey that identified background radiation and found nearly 500 samples, in just one area of SSFL, that were above background, in some cases dramatically so. The community eagerly anticipated full cleanup, which the AOC stipulated would be complete by 2017.

We are now just months away from 2017, but cleanup has yet to begin. Indeed, DOE's draft EIS - which a court ordered a decade ago and was due to be published years ago - is not yet released. Community members have feared that DOE's EIS would be a full-bodied attack on the very cleanup agreement DOE had sworn to carry out, and wondered if the EIS was being delayed so as to not come out until after Senator Boxer leaves office and can no longer take action to insist DOE live up to the promises made. This suspicion has only increased given the timing of the announcement that DOE is the CAG's secret benefactor, and that the reason for the secrecy was to avoid attention from Boxer. The community is appalled and angry, and deserves to know the full details of DOE's arrangement with the SSFL CAG.

Below please find background information and documentation on these matters, followed by a series of pressing questions. I request that DOE provide answers to the questions, as well as a copy of the SSFL CAG Foundation's grant application/proposal to the DOE and its DOE grant/contract, as well as any grant report, immediately. If there has been more than one grant to the CAG, provide information about each. The community has the right to know about the intent, character, and tactics of the agency that holds their potential health and well being in its hands. And elected officials, many of whom have been lobbied by the CAG to weaken the cleanup, must be informed about financial contributions that DOE is making to this group to influence them and help it break out the cleanup agreements. DOE funding a front group to lobby elected officials to push them to support DOE breaking its cleanup agreements would be an outrage.

Background and Documentation

The SSFL CAG was formed in 2012 over the objections of longtime community members and local elected officials. (See community petition [here](#) and letter from elected officials Julia Brownley, Fran Pavley, Shelia Kuehl, Linda Parks, and Greig Smith opposing formation of the CAG and supporting instead the longstanding SSFL Work Group [here](#).) The CAG is widely perceived as a front group for the polluters that does not represent the interests of the community, because it opposes the cleanup agreements that are overwhelmingly supported by the community. All but a handful of the 3,700 comments submitted on the AOC were in favor of the agreement. Last year over 1,600 signed a petition urging that the cleanup agreements be upheld. (See petition [here](#).) Yet every member of the CAG opposes the AOCs, despite the requirements that a CAG represent the range of community perspectives.

The CAG's leadership is composed of individuals who are former employees or contractors of the parties responsible for cleaning up the site (Boeing, DOE, and

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

NASA). Alec Uzemek worked for Boeing's predecessor, North American Aviation, at its then-headquarters in Downey for which the Santa Susana site was the field lab. Brian Sujata was Boeing's project manager for SSFL cleanup, while Boeing was DOE's contractor for the cleanup. Ross Berman worked for both Tetra Tech and CH2M Hill, contractors for the responsible parties. And Abe Weitzberg was an official at SSFL, in charge of safety for the SNAP reactors, one of which experienced 80% fuel damage in an accident. Weitzberg remains a consultant for the DOE.

Since its founding, the SSFL CAG has undertaken a multi-faceted campaign aimed at undoing the SSFL cleanup agreements. This includes exaggerating cleanup soil volumes and truck traffic and claiming that the cleanup will harm the site's natural environment and Native American artifacts (which are in fact protected by the AOC.) The CAG also attempts to minimize the contamination at SSFL and health impacts. Last year, CAG member and former SSFL official Weitzberg launched an effort to have the Agency for Toxic Substances and Disease Registry (ATSDR) refute prior health studies and weigh in against the cleanup. In the process, he maligned the authors of those studies, who expressed their objections in an article published in the *Ventura County Star* [here](#). The CAG has also made a habit of regularly and publicly disparaging longtime community members and cleanup advocates. Whereas meetings of the longstanding SSFL Work Group are packed with concerned members of the public and representatives of elected officials, very few attend CAG meetings. The last meeting had only half a dozen CAG members and a roughly equal number of the public, most of whom were critics of the CAG's biases and actions.

On August 19, 2015, CAG member Alec Uzemek announced at an SSFL CAG meeting that the CAG would be receiving a \$32,000 - \$35,000 donation from a donor who wished to be anonymous. The minutes from the meeting (which can be viewed [here](#)) state that the CAG established a non-profit foundation, "...in response to the gift from a donor who wishes to remain anonymous." The CAG leadership was so secretive about the donor's identity that it refused to inform the full CAG membership, causing one CAG member to resign, as reflected in the minutes. "As a result of the fact that the donor is anonymous, Elizabeth Harris has resigned from the CAG..." At the meeting, Uzemek repeatedly said that the donation had "no strings," and of the gift said, "Why is it anonymous at this point? Because everything we do is politically charged. We have people out there who make phone calls. And if you're the executive of a corporation and you get a call from Barbara Boxer, I'm quite sure that that's going to have an impact on it. But, we don't want that." (See video [here](#).)

In December 2015 and in May 2016, cleanup advocates and community members complained to the DTSC Independent Review Panel (IRP), established by the California legislature to investigate DTSC's many failings, about the CAG's anonymous funding and conduct (see paragraphs 4 -6 on page 2 of the IRP's May 12, 2016 minutes [here](#).)

Finally, at an SSFL CAG meeting on August 17, 2016, nearly a year after announcing the funding and the donor's request that its identity be kept secret so as to keep Senator Boxer in the dark, Uzemek announced, "DOE will be coming out with a quarterly report, probably in two or three weeks. And it will have a list of grants on the last page. And DOE is the one that made the grant for us. They are the one who supplied the funding. So, the question's been answered." A recording of Uzemek's statement can be viewed [here](#).

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

The SSFL CAG's tax returns, which can be viewed [here](#), show that the organization received \$38,600 in 2015.

Questions for the Department of Energy

1. Did DOE, as reflected in the CAG's minutes, suggest to the SSFL CAG to form a non-profit foundation so that it could provide funding to the CAG?
2. When did DOE begin discussing funding the CAG? When did it actually make the contribution, and what was the amount of the gift? Has there been more than one?
3. What is the stated purpose of the grant? What will/have grant funds be expended on?
4. Under what category of funding was this grant made? Was it made from the DOE Office of Environmental Management, the same office that renegeed on its commitment to NMCF?
5. CAG member Alec Uzameck repeatedly stated that the grant had "no strings." Does the DOE grant have any restrictions? Is lobbying prohibited? Is the CAG required to submit a report on its activities? Will it be invited to reapply for funding again this year?
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8. Did DOE's animosity toward the Santa Susana cleanup agreement, and its displeasure at CIF funding PSR-LA and the SSFL Work Group, cause it to cancel the last year of its funding to NMCF, and thus cost over a dozen community groups throughout the United States to lose funding?
9. Did DOE consult with elected officials historically concerned about SSFL cleanup as to whether the grant should be given to the CAG and whether it was a legitimate group representing the community? Why did DOE ignore the opposition to the CAG expressed, in writing, by the electeds?
10. Why did DOE not publicly solicit grant applications instead of secretly arranging to give the money to the CAG? Why did DOE not solicit a grant application from the longstanding SSFL Work Group established by the electeds, which supports the cleanup agreements DOE is supposedly sworn to uphold? Given that very few people attend CAG meetings, and the Work Group meetings are often standing-room only, why did DOE secretly fund the CAG, without a competitive grant application process, and not solicit an application from SSFL the Work Group?

Again, in addition, I request that DOE provide a copy of the SSFL CAG Foundation's grant application or proposal to DOE, as well as the DOE-SSFL CAG grant contract or agreement, immediately.

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

Sincerely,

Denise Duffield
Coordinator, SSFL Work Group
and
Associate Director, Physicians for Social Responsibility-Los Angeles

cc: Senator Barbara Boxer
Congresswoman Julia Brownley
California Senator Fran Pavley
LA County Supervisor Sheila Kuehl
Ventura County Supervisor Linda Parks
LA City Councilmember Mitch Englander
DTSC Director Barbara Lee
DTSC IRP Chair Gideon Kracov

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

Last Modified(supporter)	Title(supporter)	First Name(supporter)	Last Name(supporter)	Email(supporter)
4/2/14 1:27		Tara	Kamath	
3/31/14 0:04		Ronald	Bogin	
4/1/14 17:50	Dr.	Richard and Carolyn	Rosenstein	
4/1/14 18:32	Ms	Margery	Brown	
4/2/14 20:49		Jessica	Deltac	
3/30/14 23:16		Judith	Bloch	
3/31/14 14:51		Ryan	Moorman	
3/31/14 15:45		Toni	Kimball	
3/30/14 22:40		A	Bonvouloir	
3/30/14 22:41		Mark	Cappetta	
3/30/14 22:42		Diane	Bolman	
3/30/14 22:42		Caryn	Graves	
3/30/14 22:43		Jane	Edwards	
3/30/14 22:43		Alicia	Kern	
3/30/14 22:43		Judith	Smith	
3/30/14 22:43		Anne	Veraldi	
3/30/14 22:43		MaryGrace	Brown	
3/30/14 22:44		Robert	Burt	
3/30/14 22:47		Robert	Krikourian	
3/30/14 22:47		Pati	Tomsits	
3/30/14 22:50		Alan	Breese	
3/30/14 22:52		o	lewis	
3/30/14 22:53		Pamela	Barnes	
3/30/14 22:53		Michael	Brown	
3/30/14 22:53		David	Dorn	
3/30/14 22:54		Carol	Suhecki	
3/30/14 22:56		Beverly	Williamson-Pecori	
3/30/14 22:57		Larry	La Pointe	
3/30/14 22:58		William	Phillips	
3/30/14 22:58		Jennifer	Lopez	
3/30/14 23:00		Barbara	Escarzaga	
3/30/14 23:01		Chris	Pett	
3/30/14 23:02		Lynn	Ross	
3/30/14 23:02		Gary	Reese	
3/30/14 23:04		Jack	Couch	
3/30/14 23:04		Susaan	Aram	
3/30/14 23:05		Mark	Gotvald	
3/30/14 23:06		Lee	Jenkinson	
3/30/14 23:06		Brent	Rocks	
3/30/14 23:07		Huong	Ly	

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

3/30/14 23:07	David and Betty	Knutzen
3/30/14 23:07	Patsy	Lowe
3/30/14 23:07	mary pat	white
3/30/14 23:08	Deborah	McCloskey
3/30/14 23:08	Joyce	Frohn
3/30/14 23:09	J Simon	Cornette
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3/30/14 23:16	john	ot
3/30/14 23:18	richard	ramirez
3/30/14 23:18	Norm	Gallagher
3/30/14 23:19	Charles	Picasso
3/30/14 23:19	Andrew	Kurzweil
3/30/14 23:21	Allen	Lilleberg
3/30/14 23:21	Patricia	Lestz
3/30/14 23:22	Diane	Granahan
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3/30/14 23:24	RoseMarie	Cowham
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3/30/14 23:28	Brian	Mertan
3/30/14 23:28	Gabriel	Sheets
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3/30/14 23:31	josh	korven
3/30/14 23:32	Sandrine	Marten
3/30/14 23:32	Miryam	Bachrach
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3/30/14 23:35	JOSEPH	REEL
3/30/14 23:40	Ed	Malone
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3/30/14 23:44	Joe	Buhowsky
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3/30/14 23:55	Julie	Sanford
3/30/14 23:59	Pat	Seltz
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3/31/14 0:04	Susanna	Odry
3/31/14 0:09	Charles	Calhoun
3/31/14 0:12	LaVern	Uhte
3/31/14 0:13	Karen	Bennick
3/31/14 0:14	Dione	Pinckert

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

3/31/14 0:16	Daniel	Soong
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3/31/14 0:19	jonathan	kaplan
3/31/14 0:22	Richard	Gary
3/31/14 0:22	Grace	Padelford
3/31/14 0:24	Earl	Frounfelter
3/31/14 0:44	Jane	Block
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3/31/14 0:54	Edith	Belcher
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3/31/14 1:59	Salome	Hawkins
3/31/14 2:01	Charles	Wolfe
4/1/14 11:45	Alexis	Ellen
3/31/14 2:14	Polly	O'Malley
3/31/14 2:32	Michael	Gherry
3/31/14 2:41	Balfour	Gerber
3/31/14 2:50	Oliver	Gallaher
3/31/14 2:56	Chris	MacKrell
3/31/14 3:00	Madg	Price-LaFace

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

3/31/14 3:08	maxine	lewis
3/31/14 3:22	Jorgen	Ramstead
3/31/14 4:17	Michal	Lynch
3/31/14 4:18	Peter	Gunther
3/31/14 4:24	George	Forrester
3/31/14 4:55	Matthew	Quellas
3/31/14 5:15	Carol	Sears
3/31/14 5:26	Donald	Hyatt
3/31/14 5:30	Mike	Mohajer
3/31/14 5:35	Michael	Eisenberg
3/31/14 6:15	Elizabeth	Guthrie
3/31/14 7:36	Katie	Hale
3/31/14 8:01	Kate	Skolnick
3/31/14 8:22	Charles	Zlotnick
3/31/14 8:35	Becky	Daiss
3/31/14 9:19	Nina	Cavit
3/31/14 9:35	Daniel	Hauck
3/31/14 9:52	Jeff	Klein
3/31/14 9:58	Olga	Sevilla
3/31/14 9:58	Luis	Lozano
3/31/14 10:01	Barbara P	Mitchell
3/31/14 10:08	Joel	Hoffman
3/31/14 10:13	Helen	McBride
3/31/14 10:14	Karen	McChrystal
3/31/14 10:15	Ann	Wilson
3/31/14 10:20	Elizabeth	Carvalho
3/31/14 10:21	C. Stephen	Grant
3/31/14 10:21	Elizabeth	Cross
3/31/14 10:34	Joan	Barrymore
3/31/14 10:37	Laura	Jones-Bedel
3/31/14 10:37	John	Kouhsari
3/31/14 11:06	Thomas	Cheski
3/31/14 11:07	Carol	Savary
3/31/14 11:08	Jane	Chischilly
3/31/14 11:25	Henry	Harris
3/31/14 11:26	Donna Russell	Russell
3/31/14 11:33	Michael	Letendre
3/31/14 11:37	Xonia	Villanueva
3/31/14 11:42	James	George
3/31/14 11:52	Gerald	Shaia
3/31/14 11:56	Jessee	Greenman
3/31/14 12:04	T	Haynes
3/31/14 12:05	Gale	Gibson

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

3/31/14 12:12	Joshua	Strange
3/31/14 12:13	Charles	Jonaitis
3/31/14 12:18	Mary	Driskill
3/31/14 12:19	Marilyn	Sanborn
3/31/14 12:28	Glenn	Lanum
3/31/14 12:33	Jaime	Nahman
3/31/14 12:35	Don	Raub
3/31/14 12:38	Hartman	Krug
3/31/14 12:38	Probyn	Gregory
3/31/14 12:46	David	Boito
3/31/14 12:52	chris	rosenthal
3/31/14 12:57	Michelle	Parr
3/31/14 12:59	Adam	Lane
3/31/14 12:59	Janet	Vernon
3/31/14 13:01	Peter	Angritt
3/31/14 13:08	Barbara	Lee
3/31/14 13:30	alice	speakman
3/31/14 13:33	Lorraine D.	Johnson
3/31/14 13:38	maya	moiseyev
3/31/14 13:54	Heather	Reynolds
3/31/14 14:44	c	le
3/31/14 14:46	Don	Grierson
3/31/14 14:49	Madison	Selby
3/31/14 14:54	Andrea	Lieberman
3/31/14 14:57	louella	kanew
3/31/14 15:14	Veronica	Sheehan
3/31/14 15:17	Lucy	Alvidrez
3/31/14 15:40	Marilyn	Kirby
3/31/14 15:51	Joanne	Watchie
3/31/14 15:56	Gary	Lee
3/31/14 16:01	claudine	armand
3/31/14 16:24	Juanita	Harris
3/31/14 16:28	Bruce	Maxfield
3/31/14 16:34	Ted	Gottlieb
3/31/14 16:47	K	Lucas
3/31/14 17:16	Jerry	Clymo
3/31/14 17:33	Ben	Gaffn
3/31/14 17:49	Julian	Yerena Jr
3/31/14 18:20	JOSEPH	LITE
3/31/14 18:32	Diane	Reeves
4/1/14 22:16	Jason	Klinkel
3/31/14 18:43	John	Holtzclaw
3/31/14 19:26	Paul	Szymanowski

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

3/31/14 19:37	Joseph	Dadgari
3/31/14 19:52	Stacey A.	Ward
3/31/14 20:03	Blanche	Korfmacher
3/31/14 20:48	Ned	Long
3/31/14 21:16	kate	grotegut
3/31/14 21:50	Patty	Grogan
3/31/14 21:25	Jim	Gray
3/31/14 21:31	julle	Kramer
3/31/14 21:33	marc	silverman
3/31/14 21:47	Alisa	Battaglia
3/31/14 23:20	MARTIN	ANSELL
3/31/14 23:26	Leif	Kristiansen
3/31/14 23:58	Lauren	Murdock
4/1/14 0:24	Anne	Bergman
4/1/14 4:04	Ken	Novak
4/1/14 4:12	David	Bauer
4/1/14 9:14	Jim	McFarland
4/1/14 11:31	FRANCOIS	DE LA GIRODAY
4/1/14 11:55	Marlene	Dermer
4/1/14 12:20	bill	fisher
4/1/14 15:54	Joseph	St.Clair
4/1/14 17:57	Jeff	Barnard
4/1/14 18:04	William Preston	Bowling
4/1/14 19:42	Joyce	Johnson
4/1/14 20:00	Julie	Korenstein
4/1/14 20:31	Dorri	Raskin
4/1/14 21:00	Mary	Trujillo
4/1/14 21:04	Ron	Rattner
4/1/14 21:07	Timothy	Martin
4/1/14 21:08	Raymond	Porter
4/1/14 21:10	Ken	Cooper
4/1/14 21:12	William	Dane
4/1/14 21:26	Rich	Panter
4/1/14 21:29	Toby Ann	Reese
4/1/14 21:30	William	Townsend
4/1/14 21:32	wendy	frederick
4/1/14 21:32	Stephen	Weitz
4/1/14 21:34	Cody	Mitcheltree
4/1/14 21:37	Stephanie	Zervas
4/1/14 21:42	sien	pang
4/1/14 21:42	Mark	Gallegos
4/1/14 21:43	Moses	Carl
4/1/14 21:45	z	kastl

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Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)

DOE Scoping Comment Submissions

4/1/14 21:52	Sandra	Haney
4/1/14 21:52	Bob	Higgins
4/1/14 21:58	Mindy Sue	Huie
4/1/14 22:03	Tom	Robischon
4/1/14 22:23	Ronald	Larson
4/1/14 22:24	Timothy	Cojocnean
4/1/14 22:26	Robert	Ritchey
4/1/14 22:38	Susan	Clemens
4/1/14 22:43	Maria	Alanis'
4/1/14 23:06	William	Perren
4/1/14 23:09	Julia	Hasegawa
4/1/14 23:12	Benjamin	Dean
4/1/14 23:22	Richard	Pattie
4/1/14 23:30	Tim	Miller
4/1/14 23:40	Thomas	Saito
4/1/14 23:45	Todd	Minturn
4/1/14 23:50	Susan	Walp
4/1/14 23:54	Richard	Dimatteo
4/2/14 0:07	michael	romanelli
4/2/14 0:08	Rosiris	Paniagua
4/2/14 0:46	Winnie	Shy
4/2/14 0:47	Steven	Standard
4/2/14 1:03	Sue	Grau
4/2/14 1:07	Susan	Davenport
4/2/14 1:11	sally	abrams
4/2/14 1:21	Richard P.	Kiel
4/2/14 1:21	Richard P.	Kiel
4/2/14 1:25	Irv	Snyder
4/2/14 1:36	Ronald	Brant
4/2/14 1:36	Jennifer	Zahgkuni
4/2/14 1:47	Sheryl	Kaplan
4/2/14 1:55	Sergio	Quezada
4/2/14 2:14	Jeanette	Desmond
4/2/14 2:46	Nicholin	Wagner Quackenbush
4/2/14 3:42	Jonas	Waxman
4/2/14 5:58	Tim	Zajac
4/2/14 6:51	Sue	Hunter
4/2/14 7:11	Roger H.	Harrell
4/2/14 9:05	Barbara	Small
4/2/14 9:36	Steven	Kostis
4/2/14 10:11	Ricco	Bonelli
4/2/14 10:12	Bob	Thomas
4/2/14 10:18	Dennis	Landi

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

4/2/14 10:46	Ranjit	Chacko
4/2/14 10:55	Terrill	Maguire
4/2/14 12:23	Paula	Spence
4/2/14 12:33	Corinne	Boswell
4/2/14 12:44	Ron	Russell
4/2/14 12:54	Gordon	Wood
4/2/14 12:56	Caroline	Aslanianc
4/2/14 13:13	Todd	Snyder
4/2/14 13:49	Steven	Collins
4/2/14 14:20	Rita	Carlin
4/2/14 15:11	R	Gordon
4/2/14 15:30	VERONICA	HAYES
4/2/14 16:41	Thomas	Windberg
4/2/14 16:53	John Wm	Schiffeler
4/2/14 19:01	Marjorie	Streeter
4/2/14 19:18	Fred	Gortner
4/2/14 19:21	Danica	Keilana
4/2/14 19:28	Betty	Gates
4/2/14 19:36	R	Mellen
4/2/14 19:52	Rosalind	Murray
4/2/14 21:34	Shea	Craver
4/2/14 22:48	Zach	Bowser
4/3/14 0:14	Cindy	Mays
4/1/14 19:46	Rich	Yurman
4/1/14 17:51	Christopher Childs	Childs
4/1/14 14:50 Mr.	Frank	Hill
4/1/14 17:45 Dr.	Robert	Rosenberg
4/1/14 17:08 Mr	Will	Yeager
4/1/14 15:39 Chairman/CEO	Paul	Staples
4/1/14 13:43	Regina	DeFalco Lippert
4/1/14 13:42	Anna	Salanti
4/1/14 13:58	William	Bodden
4/1/14 23:37 President	James	Provenzano
4/1/14 14:04	Cecilia	Ball
4/1/14 14:17 Dr.	Joyce	Jones Guinyard
4/1/14 15:57 Dr.	George	Ellison
4/1/14 15:07	Jamie	Solow
4/1/14 14:47 Ms.	Julie	Levine
4/1/14 16:22	Marvin	Kleinberg
4/1/14 13:40 Mr.	Michael	Collins
4/1/14 20:38	Sandra	Burnett
4/1/14 17:46	Ellen	Levine
4/1/14 13:52	jon	grutman

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

4/1/14 14:58	lauren	Ornelas
4/1/14 16:56	Sandra	Joos
4/1/14 18:10 Ms	dinda	evans
4/2/14 1:27	Tara	Kamath
4/1/14 16:11	Horace	Gaims
4/1/14 15:35	Mark	Reback
4/1/14 13:46	Sara	Schmidt
4/1/14 17:50 Dr.	Richard and Carolyn	Rosenstein
4/1/14 14:36 associate profes	Ralph	Delfino
4/1/14 14:16 Dr.	William	Perkins
4/1/14 13:59	Bennett	Ramberg
4/1/14 13:53	Judith	Broder
4/1/14 18:04 nuclear posture	Marjorie	Moss
4/1/14 13:40 Mom	Julie	du Bois
4/1/14 13:43	Bobette	Campbell
4/1/14 13:58 Mr.	Edward	Fisher
4/1/14 15:38 M.D.	Lawrence	Green
4/2/14 1:11	Stephen	Sacks
4/1/14 14:59	Sharon	Torrisi
4/2/14 22:52	John	Flick
4/1/14 14:03	James	Dahlgren
4/1/14 14:38	Midi	Berry
4/1/14 15:05	Marie	Mason
4/1/14 19:19	Elaine	Herzog
4/1/14 14:13 Ms	Leslie	Leslie
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3/31/14 13:58	Robert	Voiss
4/1/14 15:05	Marie	Mason
4/1/14 12:40	scott	spencer
3/31/14 23:10	William	Kent
3/31/14 21:21	debra	froling
4/1/14 16:40	Margaret	Lapham-Kennedy
3/31/14 15:28	Kevin	Diggs
3/31/14 18:11	Debra	Mancuso
3/31/14 13:05	Rebecca	Hopkins
3/31/14 13:20	Sandy	Capaldi
4/2/14 15:07	Ana	Grinta
3/31/14 13:09	Sibylle	Allgaier
4/1/14 21:25	Hilary	Milner
3/31/14 13:08	Katherine	Weisman
3/31/14 13:19	Alexander	D'Anca
3/31/14 14:13	Toni	Downen

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**Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)**

DOE Scoping Comment Submissions

3/31/14 14:55	Jeff	Pettus
3/31/14 22:47	Robert	Ruth
4/1/14 3:16	Ronald	Schultze
4/1/14 10:38	Robert	Anton
4/1/14 10:55	RJ	Hosking
4/2/14 12:10	Michele	Morwood
4/2/14 16:46	Robert	Pollard
4/2/14 17:22	Yuri	Stavitsky
4/1/14 19:58	Ronnetta	Lawton
4/1/14 17:10	Bruce	Little
4/1/14 17:46	Richard	Carter
3/31/14 22:09	Marilyn	Green
4/1/14 13:33	Marilyn	Ucok
4/1/14 17:35	Sylvia	Navarro
4/1/14 17:51	Ellen	Lubic
4/1/14 17:55	Lucy	Mendoza
4/1/14 18:16	Katlynn	Carter
4/1/14 21:14	Millie	Reina
4/1/14 23:40	C	Becerra
4/2/14 1:27	Randolph	Nemecek
4/2/14 12:24	Steven	Carlson
4/2/14 12:59	Laura	Espinosa
4/2/14 15:48	Dan	Wright
4/1/14 18:32	Margery	Brown
3/28/14 16:18	Catherine	Lincoln
3/28/14 18:28	Robert & Claire	Heron
3/29/14 8:47	Richard and Chihoko	Solomon
3/28/14 18:01	Pauline	Saxon
3/28/14 17:57	Eric	Estrin
3/28/14 18:03	Laura	Plotkin
3/28/14 18:08	Elizabeth	Lincoln
3/28/14 19:03	Richard	Lincoln
3/28/14 19:29	Rachel	Sarnoff
3/28/14 19:35	casey	danson
3/28/14 20:52	Mait	Alexander
3/29/14 12:59	Sarah	Maizes
3/31/14 12:10	Mike	Farrell
3/31/14 13:39	JAMES	HORNBECK
3/31/14 15:12	eugenie	ross-leming
3/31/14 16:02	James	Farrell
3/31/14 19:09	George P	Vogt III
3/31/14 21:51	dolores	brown
4/1/14 14:04	robert	singer

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Commenter No. 136 (cont'd): Denise Duffield, Associate Director,
Physicians for Social Responsibility Los Angeles (PSR LA)

DOE Scoping Comment Submissions

4/1/14 17:07

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Commenter No. 137: Michael N. Feuer, Los Angeles City Attorney; Mitchell Englander, City of Los Angeles Councilmember; Sheila Kuehl, Los Angeles County Supervisor; Steve Bennett and Linda Parks, Ventura County Supervisors



April 12, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings:

Thank you for the opportunity to comment on the U.S. Department of Energy's (DOE) Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (DOE/EIS-0402), which DOE issued in January 2017. As you know, we have been waiting since August of 2007 for the preparation of this environmental document.

We are concerned and disappointed that after years of delay, DOE has chosen to prepare a Draft EIS in which every remediation option presented fails to comply with the previously agreed upon cleanup standards in the 2010 Administrative Order on Consent (AOC) with the Department of Toxic Substances Control. In that AOC, DOE agreed to perform a full clean-up of the Santa Susana Field Lab site to stringent local background levels. The purpose of the EIS, consistent with DOE's own previous scoping document, is to evaluate the environmental effects of that cleanup and to evaluate alternatives for meeting the AOC cleanup standards. Instead, DOE has chosen to abandon the AOC and prepare a Draft EIS on remediation options that will leave much of the contamination in place.

137-1

The most protective remediation option in the Draft EIS, Option 1, proposes to leave 34% or more of the contamination on site – over half a million cubic yards– harming the environment and exposing future users of the site and those offsite in the vicinity to unacceptable risk of future cancers and other ailments. Option 1 is not, as the Draft EIS suggests, AOC-compliant. Under the AOC, no "leave in place" alternatives will be considered. The even more untenable remediation Options 2 and 3 discussed in the Draft EIS propose to leave 86-90% or more of the contamination on site, respectively.

The Draft EIS also makes no attempt to study alternate conveyance of contaminated soil and debris from the site, ignoring local community input regarding additional traffic and street damage. This flawed and incomplete consideration of transportation options relies on inflated truck trip estimates, and provides the basis for the document's assumption that a much less stringent clean-up standard must be accepted at the site – one that puts the environment, the public, and future generations at risk.

137-2

We reject the proposed remediation options in the Draft EIS. To accept any of them would in our view violate the AOC cleanup standards and condemn this and future generations to an unacceptable risk of

137-1 cont'd

137-1 The Draft EIS and this Final EIS include an alternative that incorporates the technical elements of the AOC. Please refer to Section 2.2 of this CRD, "Compliance with the 2010 Administrative Order on Consent," for a discussion of how the Cleanup to AOC LUT [Look-Up Table] Values Alternative incorporates the technical requirements of the 2010 AOC using AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. Soil that DOE proposes to leave on site through application of AOC exemptions or for monitored natural attenuation would be at concentrations that fall within the EPA target risk range; these soils would be identified in a soil remediation plan that DOE would submit to DTSC for approval.

The AOC contemplates in-situ treatment of soils. Monitored natural attenuation was included in the EIS at the suggestion of DTSC staff. Section 2.9 of the AOC states that the DOE soil remediation plan to be submitted to DTSC for approval describe, "Any areas proposed for in situ or onsite treatment to achieve cleanup goals..." Additionally, DTSC in its *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (DTSC 2017b) included the potential for in-situ treatment as a viable option for soil cleanup.

137-2 The commenters are incorrect that "The Draft EIS makes no attempt to study alternative conveyance of contaminated soil and debris from the site" and DOE disagrees with the assertion that the EIS includes inflated truck trip estimates. In both the Draft and Final EISs, DOE used geographic information system analysis of the extensive soil sampling data to quantify the volume of soil that exceeds the DTSC-established LUT values. The EIS reflects the number of trucks trips that would be required to transport the estimated volume of excavated soil. Several options to convey soil from the site were discussed in Draft EIS Chapter 2, Section 2.2.3. Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response. Alternative transportation methods (alternative conveyances) were considered in this EIS; all were dismissed by DOE from detailed study. The reasons for their dismissal from further study are provided in Chapter 2, Section 2.2.3, of this Final EIS. This Final EIS (see Chapter 2, Section 2.2.4) also includes a summary of the DTSC transportation analysis that is included in the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (DTSC 2017b). DTSC concluded that, "transporting soil by truck via Woolsey Canyon Road was the most technically feasible and least environmentally impactful option..." DOE concurs with DTSC's conclusion.


Commenter No. 137 (cont'd): Michael N. Feuer, Los Angeles City Attorney; Mitchell Englander, City of Los Angeles Councilmember; Sheila Kuehl, Los Angeles County Supervisor; Steve Bennett and Linda Parks, Ventura County Supervisors

cancers and other ailments from contamination from the site. We encourage you to do the only right thing – honor your previous commitment and study alternatives of how to clean this site to the 2010 AOC's local background levels.

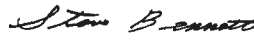
|| 137-1
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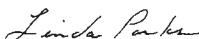
Sincerely,


MICHAEL N. FEUER
Los Angeles City Attorney


MITCHELL ENGLANDER
Council President Pro-Tempore
Councilmember, Twelfth District
City of Los Angeles


SHEILA KUEHL
Los Angeles County Supervisor
Third District


STEVE BENNETT
Ventura County Supervisor
1st District


LINDA PARKS
Ventura County Supervisor
2nd District

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Commenter No. 138: Matt Ruhland

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Dept. of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

For the last decade, my family and I have lived in the area surrounding the Santa Susana test site, and I am amazed that I have only recently learned about the extent of the dangerous chemical and radiological contamination that has been sitting on our doorstep. Beyond that, I am appalled by how blatantly the Department of Energy has been shirking its responsibility to clean up its own mess. As a result of this negligence, radioactive and chemical contaminants from the test site have been traveling into the vulnerable households of families and children surrounding the site for decades.

The community has spoken out about this issue countless times, for decades, and with incredible passion and resilience. In December of 2010, the Department of Energy entered into an agreement (AOC) with the state regulatory agency, the DTSC, whereby the Santa Susana Field Laboratory would be cleaned up completely to background. In other words, the DOE is legally responsible for removing all detectable contamination from the site and returning it to the condition it was in before any pollution occurred. The cleanup set in 2010 is clearly what the public desires, as during the AOC public comment period, 2,000 comments were received in support of the document and only 20 in opposition. Within this 2010 agreement, the Department of Energy promised that the entirety of the cleanup would be complete by 2017. Currently, in the early months of 2017, no substantial cleanup effort has begun. DOE has blatantly missed its deadline but is currently facing zero penalties.

138-1

138-2

138-1 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

138-2 There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

In this EIS, DOE does not propose to breach the 2010 AOC signed with its regulator, DTSC. However, NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated do leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 138 (cont'd): Matt Ruhland

Recently, the DOE issued its Draft Environmental Impact Statement (DEIS). In this new statement, the DOE breaks the commitments it made in the AOC as well as the past promises it made about any future EIS. The Department of Energy promised that any cleanup alternative proposed in a future EIS would be solely limited to the use of different technologies to achieve its same AOC obligations. According to the AOC agreement DOE signed in 2010, there are several key requirements surrounding the cleanup. First and foremost, the agreement is legally binding and the DOE cannot unilaterally choose to violate any part of the agreement, as they are doing with the current draft EIS. Secondly, the cleanup of soil must be to background (all detectable contamination removed). Finally and critically, the agreement stipulates that no "leave in place alternatives will be considered." Every option this EIS puts forward would leave in place large amounts of contamination, despite the explicit prohibition against that in the AOC. The first option that DOE presents would leave in place as much as 39% of the contamination. The second option would leave in place as much as 91%, and the third option would leave in place as much as 99%.

As a community member with family and friends deeply affected by the sluggish Santa Susana cleanup process, I was infuriated by what I heard from the DOE representatives at the public comment hearing hosted by DOE on February 18th in Simi Valley. The main point of contention between the DOE and cleanup activists is whether the alternative cleanup standards being proposed in the draft Environmental Impact Statement are protective of human health and the environment. In their official presentation, the DOE spokespeople misrepresented, and in some cases lied, about the impacts of their proposed cleanup alternatives. For example, in a statement given to the VC Star by DOE representative John Jones, he claims that "all three actionable (plans) are protective of human health and the environment." By actually reading the cleanup standard value tables presented in the EIS, however, it is clear that this statement is

138-2
cont'd

138-3

138-3 As explained in the Draft EIS, DOE used suburban residential risk-based screening levels (RBSLs) or risk slope factors based on the direct exposure pathways and without the indirect garden pathway to evaluate potential impacts to an onsite receptor. Scenarios are based on the most-likely future land use. As stated below, Boeing has entered into agreements that will limit the future land use to open space.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. DOE included the residential scenario as a conservative risk analysis, not because there will be residential reuse of the property in the future.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

With regard to the specific example of strontium-90, the risk identified by the commenter includes the indirect garden pathway and is apparently based on the output of the EPA dose calculator. This dose calculator produces the same risk slope factors (PRGs) as were used in the Draft EIS when the indirect garden pathway is not included in the model. Given the future use of the site as open space, the indirect garden pathway is not applicable and the risk-based concentration of strontium-90 identified in the EIS is protective of public health.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

Commenter No. 138 (cont'd): Matt Ruhland

false. One of the three cleanup alternatives proposes a standard of 1200 pico-curies per gram of radioactive strontium-90 left after cleanup. This is 330,000 times higher than the suburban residential standard outlined by the EPA that the DOE promised to follow. The EPA standard is based on a one in a million cancer risk estimate, so the 330,000 times higher standard proposed in the EIS is associated with a one in three cancer risk. This is in no way protective of human health, and this is only one example of DOE's deceit.

How can the public trust the claim that the DOE is protecting them, when it has consistently lacked integrity and transparency when engaging with the public? At every turn, it seems as though the DOE is attempting to quell public outcry through dubious means.

An incredibly frustrating aspect of the February 18th meeting was the ridiculous time schedule that the DOE refused to change, despite many objections from the community. The supposed objective of the meeting was to solicit feedback from the community regarding the draft EIS. It appeared, however, that the DOE was trying very hard to suppress such feedback. The Department strictly enforced a 180 second time limit on verbal comments and cut off many community members that were trying to voice their concerns. There was almost an hour of unused time at the end of the meeting and still they refused to let anyone finish or expand upon their comments. The DOE used a projector during their presentation, yet refused to allow community members to use it to display additional content to accompany their comments. Nowhere on the public hearing announcements did it prohibit members of the public from presenting slides. They were refusing to give the people the same opportunity as the government. All-in-all, the entirety of the meeting rang of insincerity.

Not only is the DOE attempting to stifle public verbal testimony, but also the electronic comments as well. The public has asked numerous times for email comments to be accepted, as that is the most practical and effective way of communicating in this day and age. However,

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138-4

138-4

DOE's time limit on oral comments at the public meetings was set to allow all stakeholders equal time to present their comments. All members of the public who registered to comment were allowed to present their comments. Restrictions on slide presentations during the oral comment periods at the public hearings were also intended to give all commenters equal time. Slide presentations could be submitted by providing a printout of the presentation at the public hearing or by U.S. mail, or by uploading the presentation on the comment website. The intent was not to quell public comment; multiple means of submitting comments were available. These methods included the website, U.S. mail, providing oral comments during the public meetings or to the court reporter before the public hearings commenced, and providing a written comments at the public hearings. DOE apologizes for the confusion over the email address. The email address was previously created for scoping comments, not for receiving public comments on the Draft EIS. The email address was discontinued when DOE realized stakeholders had begun to use it for submitting public comments on the Draft EIS. In order to better track comments, DOE determined the website was the best method for electronic comments. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

Commenter No. 138 (cont'd): Matt Ruhland

the DOE has refused, and even went so far as to delete the email address they had generated specifically for the DEIS and presented as a means to contact the DOE with questions and concerns. Beyond restricting email comments, the DOE is limiting the size of comments and file attachments submitted through the website

If the DOE were genuinely interested in having public input, they wouldn't be so resistant to receiving it. DOE promised a full cleanup. DOE has now broken that promise. Not only that, it has now worked very hard to frustrate the public's right to criticize that breach of its commitments. This is not how to behave if, as you say, you have nothing to hide.

Sincerely,

Matt Ruhland

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Commenter No. 139: Devyn Gortner
Teens Against Toxins

This testimony was given on 2/21/17 at the Public Comment Hearing and is being submitted in writing so that the full comment may be on public record.

My name is Devyn Gortner and I grew up less than 5 miles from the site. I am the founder of Teens Against Toxins and am here today, as I have been for nearly a decade, to speak on behalf of the younger community near SSFL. I wish I could play on repeat what Grace and Ryan shared with you, but instead I'll take my background as an environmental and nuclear policy researcher to debunk the claim that the clean ups proposed in the DEIS are protective of human health.

DOE claims their risk-based cleanup option would allow a 25 millirem per year exposure. That is the equivalent of a chest x-ray per month, for a year, for decades.

But the actual number is far higher. Please bear with me, I promise what I'm about to share is simple math.

To calculate its estimated risks to human health, DOE claims to have used the suburban residential scenario, but actually left out the garden component of that scenario, which is required to be included. In fact, the DOE's risk estimates low-ball the dose by a factor of at least 100-1000.

For comparison, if you run EPA's dose compliance calculator for the same scenario DOE used, but include the backyard garden component as required, and look at the amount of strontium-90 that would yield a dose of 25 mrem, which is the DOE proposed standard, you would be looking at 19.4 pCi/g. But DOE is proposing a standard of 1200 pico-curies per gram of strontium-90. Thus, DOE's Option 3 would

139-1

139-1 There is no regulatory requirement set at the national (EPA) and state (DTSC) levels that require incorporation of a garden scenario when considering future risk. Scenarios are based on the most-likely future land use. The future use of the SSFL property is that of open space. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. DOE used the residential scenario as a conservative risk analysis, not because there will be residential reuse of the property in the future.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

When a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989) does allow for some averaging and prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and only suggests the use of a maximum value as a screening tool. It is important to note that under any of the soil remediation alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment, would be removed. Soils that would be left on site would have lower concentrations of chemical and/or radioactive constituents. Each of the three action alternatives analyzed in this EIS would leave SSFL Area IV and the NBZ safe for their designated future land.

Commenter No. 139 (cont'd): Devyn Gortner
Teens Against Toxins

produce not a chest X-ray a month, but 62 X-rays a month, or 744 per year, for decades. Children like Grace and Ryan, pregnant women, families would be exposed at huge levels.

And remember that DOE's proposed standard is based on dose and concentrations averaged over a wide area, meaning the contaminated places are diluted by averaging with lower readings half a mile away. So the actual exposure could be not 744 X-rays a year, but even in the thousands. My family has a history of heart problems and so we are familiar with chest xrays- and even our doctor recommends no more than 1 per year. The thought of being forced to get thousands per year is infuriating.

I said it on Saturday and I'll say it again. You promised me you would protect me, my family and my community. You promised 6 years ago you would clean up the mess you made so that it would be like you never made it in the first place. The community has debunked every single one of your excuses as to why you cannot keep this promise. Maybe we will never have definitive proof that the exact contamination you left created the cancer that plagues Grace and Ryan and dozens of other children. But even the slightest chance it could be linked should be more than enough to act and act NOW. Better safe than sorry. It rained today, washing more and more of the contamination down into the neighborhoods below the site. Tomorrow it will be sunny and the children will go back to playing in their yards. Your move.

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DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

139-2 This EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

139-3 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concern about dispersion of contamination from SSFL, as well as Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

**Commenter No. 140: Tori Kjer, Los Angeles Program Director,
The Trust for Public Land**



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April 11, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

RE: DOE/EIS-0402, Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Ms. Jennings

The Trust for Public Land has reviewed the Department of Energy’s DEIS for Area IV and the Northern Buffer Zone (“NBZ”) of the Santa Susana Field Laboratory (“SSFL”) and writes to support the Conservation of Natural Resources Alternative. In balancing several factors, including the planned use of the area as open space and impact to the natural environment and native species, the Conservation of Natural Resources Alternative offers cleanup of harmful contaminants without unnecessary excavation. The Trust for Public Land also urges careful examination of the Cleanup to AOC Look-Up Table Values Alternative because it is overly disruptive of the natural environment.

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SSFL is surrounded by land that is mostly undeveloped, including the Upper Las Virgenes Canyon Open Space Preserve to the south and west, and the Sage Ranch, parkland that runs along the northeastern boundary of the property. The American Jewish University Brandeis-Bardin Campus is also located to the north and is largely open space. The Conservation of Natural Resources Alternative allows for the property to continue as a critical wildlife corridor. Located on approximately 2,850 acres in the Simi Hills, SSFL is a part of a unique wildlife corridor that unites the Sierra Madre Ranges of the Los Padres National Forest to the Santa Monica Mountains and the Pacific Ocean, known as the Santa Monica-Sierra Madre Connection according to the *South Coast Missing Linkages Project*, an interagency analysis of wildlife corridors. Several mammal species have been known to travel through Area IV and the NBZ, including bobcat, coyote, mountain lion, and deer. It is also a corridor for at least one threatened bird species and has been assessed as a suitable habitat for several threatened, rare, or endangered bird species. The Cleanup to AOC Look-Up Table Values Alternative would destroy the topographical character of the land, and further, the ten plus years required to complete the planned excavations would render the area inaccessible to these animals and could potentially permanently close the area to migration. The Conservation of Natural Resources Alternative also allows Area IV and the NBZ to continue functioning as a habitat for unique and diverse vegetation as well as a critical plant dispersal corridor. Several different plant communities populate the site, including oak and walnut woodlands, chaparral, and grasslands. Sandstone outcrops are scattered throughout the area and support a distinct vegetation

140-2 cont'd

140-1 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please refer to Section 2.1, “Preferences for Cleanup,” of this CRD for further discussion of this topic

140-2 Chapter 2, Table 2-9, summarizes the impacts of each soil remediation alternative, and provides a means to compare and contrast the alternatives. Chapter 5, Section 5.5.5 of the EIS acknowledges that potential cumulative impacts from reasonably foreseeable actions in the ROI in combination with the proposed actions at SSFL by the DOE could affect regional wildlife movements (wildlife corridors). Under all soil remediation alternatives, including the Cleanup to AOC LUT Values Alternative, the amount of land disturbed at a given time would be variable. Remediation would be done in stages, with certain areas being excavated, others backfilled and showing signs of recovery from revegetation, and still others being undisturbed. It is a presumption in the EIS that revegetation will be successful. DOE notes that because the area would be remediated in stages, it is not correct to picture the entire 150 acres disturbed and 881,000 cubic yards removed all at the same time. While DOE agrees that disturbance of 150 acres across the site would be disruptive to the existing visual and natural setting, DOE is confident that a successful backfill, contouring, and revegetation effort could restore the site to a natural-looking state. DOE would backfill areas of removed soil and bedrock (an estimated 75 percent replacement) and to recreate the contours of the current land surface to the extent possible; this effort would prevent the formation of any large pits.

Commenter No. 140 (cont'd): Tori Kjer, Los Angeles Program Director,
The Trust for Public Land

community. Additionally, the property contains at least two endangered or rare plant species and is a delicate area still in the process of regenerating due to the 2005 Topanga Fire and other disturbances. Changes in the topography and soils would affect plant dispersal patterns and could ensure that unique native vegetation never fully reestablishes itself.

We encourage careful consideration of the level of disruption to native plant vegetation and the general topography of the area proposed under the Cleanup to AOC Look-Up Table Values Alternative. If unnecessarily invasive techniques are used they could forever change the character of this unique ecosystem. An estimated 933,000 cubic yards of soil would be removed as nearly all of the soil in Area IV and the NBZ contains at least one contaminant exceeding background levels. Moreover, this alternative requires that replacement soil meet the same low threshold for contaminant levels as the soil removed. Soils meeting this threshold are not typically available, an issue that is highlighted but not resolved in the DEIS. Embarking on such an aggressive cleanup strategy could lead to permanent and irreversible disruption of the land and its natural systems. Additionally, the excavations planned under the Cleanup to AOC Look-Up Table Values Alternative would leave an enormous carbon footprint. Approximately 116,000 total truck roundtrips over 10 years would be required to complete the cleanup according to this plan, with an additional 62,500 roundtrips for cars or light-duty trucks due to worker commutes. This would result in a release of up to 84,000 metric tons of greenhouse gas emissions.

Given Area IV and the NBZ's important role as a wildlife and plant dispersal corridor and the planned long-term use of the land as open space, The Trust for Public Land encourages consideration of the Conservation of Natural Resources Alternative. When considered alongside the other alternatives presented in the DEIS, the Conservation of Natural Resources Alternative appears the most tailored to the sensitive needs of the SSFL site and would ensure protection of the natural ecosystem of the area, one that is critical to maintaining connectivity within the greater Santa Monica-Sierra Madre Connection as a whole.

Sincerely,



Tori Kjer
Los Angeles Program Director
The Trust for Public Land

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Commenter No. 141: Albert Knight

THE BURRO FLATS BURRO PICTOGRAPH

by Albert Knight

February 13, 2017

Many people that study "rock art" (I am speaking of prehistoric rock art here) sometimes try to determine what the art means; that is, try to determine what "statement" the artist was attempting to make. Any efforts towards interpretation, however, are fraught with peril, for how can someone from one culture successfully interpret symbols used by a completely different culture? I myself, therefore, rarely try to explain the meaning of rock art images; better, I think, to simply enjoy what I am looking at, and to limit myself to a description (to the degree possible) of what I am seeing, although I do admit that it is great fun to speculate about possible meanings. OK, but how about trying to interpret symbols from one's own culture? Hmmmmm . . .

I have a specific example of *historic rock art* in mind here, and this specific example is important, I think, because it is located in an area that may be "negatively impacted" by on-going efforts to clean-up a considerable amount of both real and perceived "industrial pollution." The clean-up, in fact, if allowed to proceed to the fullest extent proposed, will completely destroy a large beautiful natural area in the eastern Simi Hills (note: this clean-up effort is beyond the scope of this paper- those that are interested are advised to do an on-line search for the *Santa Susana Field Laboratory*, and to examine the various links that discuss the Field Laboratory and the on-going and proposed clean-up). The point of this paper then, is that the I believe that it is possible that if this specific historic rock art is "properly" interpreted, that interpretation may help insure that the site, and the area where the site is located, will not be severely impacted by the clean-up.

In any case, the specific example of historic rock art that is discussed here depicts what I now believe to be a painting of a burro. This burro painting (and seven other paintings, that are not discussed here) is/are found in a small rock shelter close-by the geographical feature known as *Burro Flats*. This site has been previously described in a report by the author- *The Burro Flats Burro Pictograph Site, 56-001772 (2016a)*. The current paper will not attempt to repeat all of the information provided in the 2016 paper. Briefly, the earliest written reference to Burro Flats is a 1888 "Map of the Lands of Rancho Simi," where the *Portrero del Burro* is shown as being located in Subdivision A. The earliest known depiction of the burro painting itself is a sketch by a Mr. Walter Brinkop, from 1914; Brinkop subsequently commented on his sketches in a note to the Southwest Indian Museum, in 1920. Burro Flats and the surrounding area eventually became part of what was briefly known as *Sky Valley Ranch (1939-1954)*; the ranch families (the Silvernale's and the Hall's) were aware of the existence of the burro paintings (Knight 2017, in process). The burro painting and the associated paintings were first examined in detail by local rock art expert Mike Kuhn, beginning in 1983. The burro painting (and the site in general) was formally recorded by the CRM firm W&S, in 2001. The author was made aware of the existence of the site by Dr. Edwin Krupp, the Director of Los Angeles Griffith's Observatory, in the early 1990; the author visited the site for the first time in 2012.

A natural-light photograph of the burro painting, by the author (2012), can be seen in Figure 1. A natural-light photograph, and a photo-enhancement of the same picture, by Devlin

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DOE recognizes the cultural importance of the Burro Flats Burro Pictograph (CA-VEN-1772) and considers it eligible for listing on the National Register of Historic Places. The National Historic Preservation Act (NHPA) Section 106 Programmatic Agreement (being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC) addresses protection measures during cleanup activities.

Commenter No. 141 (cont'd): Albert Knight

Gandy (2016), can be seen in Figure 2. A photograph of a burro (courtesy of Bing), for the purposed of comparison, can be seen in Figure 3.



Figure 1



Figure 2

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Commenter No. 141 (cont'd): Albert Knight



Figure 3

The painting, when the author first heard of it, was described as a "lavender horse," and also, as a "pink horse." But after seeing photographs of the painting, it occurred to me that the very short legs indicated that the animal was not a horse, but was another kind of equine. And the obvious close-association of the painting with Burro Flats, quickly led to the conclusion that the painting actually depicts a burro. At this point, it is necessary to digress for a moment, and admit that I quickly realized that I do not know a great deal about burros. Although both of my parents were born and raised on ranches, and I was introduced to horses at an early age, I had never been around any other types of equines, including burros (note: burros, donkeys, and asses are different terms for the same highly variable species of animal, *Equus asinus*). And the only burro (donkey, ass) symbolism that I knew anything about is the donkey that represents the Democratic Party. This, I note, came about because during the presidential campaign of 1828, Andrew Jackson's detractors referred to and caricatured him as an "jackass" (among other things), and Jackson, being a son of the soil, took this as a compliment and used a donkey as a PR symbol; some years later, the Democratic Party adopted the donkey as the party mascot.

In any event, having decided that the equine depicted at Burro Flats was a burro, and not a horse, I went about my business. The subject occasionally came up in conversation, and those (very few) people that I discussed the subject with were not entirely in agreement about my burro vs. horse interpretation: maybe yes, maybe no. They pointed out that in the painting, the head is very small, relative to the over-all size of the animal, and the neck too long and thick (to be an accurate depiction- compare Figures 1 and 2 with Figure 3). The paint along the belly is dripping down, etc.; perhaps these faults, and the short legs, indicated nothing more than the artist was no Leonardo.

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Commenter No. 141 (cont'd): Albert Knight

And then, I read John P. Harrington's Reel #106 notes on the Fernandeno, which were recorded in 1914-1917. Specific important comments by Juan Menendez, the grandson of Odon Chihuya, the principal grantee of *Rancho El Escorpion*, and the son of Espiritu Chihuya Leonis (one of Odon's daughters), include: "Menendez knows a rock about 2 miles upstream from Charlie Bell's house where the footprints of our savior and a burro are to be seen in a rock" (1986:37, 106-152:4:20), "Here in El Escorpion the informants have visited a place where on a big flat rock are a child's tracks, also the tracks of a burrito" (1986:37, 106-220:2:1), and, importantly, "Menendez says that when El Senor first came to this earth the earth was not yet dry, and these are his tracks" (1986:37, 106-220:2:2); the English translation of the Spanish "*El Senior*," is "*God*." Menendez, as Odon's grandson and as Espiritu's son, was in the chiefly line of the west San Fernando Valley Native American/mixed race community, and his comments are therefore pertinent and important.

From these comments we can see that in modern English, Menendez- the son of chiefs- told Harrington that "After the world was created, and while the earth was still damp, God, our savior, and a little burro visited (what was thereafter known as Burro Flats) and left their tracks." In my 2016 paper, I stated that: "... given the Burro Flats-specific information that Juan Menendez provided to Harrington, it seems likely that the attribution of the geographical name 'Burro Flats' derives from that very special animal, who was a participant at the Nativity." I noted that everyone has seen a nativity scene where a burro gazes down upon *our savior*, and concluded by saying that "It is true that no burro (ass, donkey) is mentioned in the Bible, where the Nativity is described in the Gospels of Luke and of Matthew, or in the Koran, where the Nativity is discussed in Sura 19, Maryam, or Mary the Mother of Jesus (Parrinder 1995:75-82)" ... This very special burro, however, has often been included in Christian nativity scenes (see Figure 4, by Botticelli) "since before the middle ages- a tradition that continues today." In other words, the import of what Menendez told Harrington is that the name Burro Flats, and the painting of the burro at Burro Flats, are indicators of divinity: i.e. the name and the painting indicate that Burro Flats is a sacred place.



Figure 4

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Commenter No. 141 (cont'd): Albert Knight

Then, one day, I happened to open my copy of *Those Were the Vaqueros - The Collected Works of Arnold R. Rojas* (note: Rojas was the historian of everything Vaquero related, in south-central California), and there, at the very beginning of that excellent history, were Rojas' comments on and complements to the burro (Rojas 1974:3-6). When we see his comments, it is immediately clear what an important animal the burro was and in many places still is. As for California history, as Rojas says, had it not been for the burro, there would have been no story. Rojas says: "Though their master may have never thought to eulogize them, the real heroes of the migrations into California from Sonora were the lowly burros. . . . It is difficult to see how the people who came in early days could have made the journey . . . without the patient little animal the paisano could most readily afford . . . many rich mines in the deserts of the west would never have been discovered had not the early-day prospector found at hand a noble animal *which fools, in the depths of their ignorance, have made the symbol of stupidity*" (emphasis by the author).

Rojas continues: "Ask any old paisano who knows him and he will tell you the burro is the smartest and bravest of all animals. Put him against the largest and strongest horse and the proudest charger will turn and flee from the onslaught of the lowly jackass. He will, in a fight with a grizzly bear, give a better account of himself than any other animal, battling with a ferocity that belies his melancholy bray, gentle nature, and great trusting eyes . . . The old men would smile with pleasure and were eloquent when asked to enumerate the virtues of the faithful and staunch companion of their boyhood. 'Si,' they would say, 'the burro is brave. He is the only domestic animal besides the dog who will fight to the bitter end and never quit. The dread puma will run away from a rain of kicks dealt by this sturdy battler . . .' Burros are put in a herd of horses to protect the foals. The proud stallion may prance about his mares and fight others away in jealousy, but it will be the undersized alien in the band who will keep his head when the horses are in panic, and fight the wolves away from the colts. A burro or mule will kill a wolf."

After rediscovering the comments on burros by Rojas, I decided to pursue the subject further, and I discovered quite a bit more interesting information, only a small part of which I will repeat here (but see Brookshier 1974). The reader will note, especially, that my quick re-reading of Luke and Mathew (and the Koran, no doubt) were inadequate.

According to Brookshier: An average adult burro weighs ca. 600 lbs., about 1/2 that of a horse, and is ca. 45" tall, at the withers- about 3/4 the size of a horse (many burros are even smaller). The horse's legs and tail are longer, but despite their differences in size, the head of the burro is only slightly smaller than that of a horse, so that for those used to seeing horses, but not burros, the burro's head looks too big. On the other hand, the ears of a burro are some 10 inches long, while those of a horse are only 5-6 inches long, so that the burro can hear better; the burro can also see better, and "rarely, if ever, is a burro bitten by a rattlesnake . . ."

Burros can be gray, black, brown, white, or some combination thereof. White burros were, and in some places still are, considered to be special, sometimes even sacred. A burro's temperature is 99-degrees, the closest of any domesticated animal to man. A well-cared for burro may live 40 to 50 years- a lifespan of twice or more than that of a horse. Like Rojas, Brookshier says that "Burros have distinctive 'personality,' as well as physical, traits . . . A burro in a pasture with other grazing animals- cattle, horses, or sheep- will almost invariably be the first to detect the approach of a stranger . . . burros therefore make good sentinels or guards. The burro is also courageous, he is not afraid when a dog or wolf enters the pasture but, on the contrary, often chases the invader away. This is especially true of a mother burro . . . she is fearless in her duty. Female burros make good mothers, are very proud of their babies, and will fight a mountain lion to protect them" (1974:14). Many of those that know them say that the burro is more intelligent than the horse. "Burros thrive

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Commenter No. 141 (cont'd): Albert Knight

on attention and affection . . . and they make good pets. The larger ones present some problems . . . when they are permitted into the house." Brookshier advises people to not let their burro to sit on a couch or a chair- they will break it down (1974-15-16).

Brookshier states that historically, burros have been mentioned in both positive and negative contexts, for 1000's of years, and that they are mentioned by all of the early Middle Eastern civilizations, back to *The Epic of Gilgamesh*, the oldest book in the world. He notes that, "One concordance of the Bible lists 153 references to the burro; no other animal is referred to so often. Genesis leads with 18 references; Exodus follows with 12." The Jews took good care of their burros and "Jewish law prescribed that both the ass and the ox were to rest on the seventh day, like their owners (Exodus 23:12)" (1974:91). Of all of the animals mentioned in the Bible, only the serpent in the Garden of Eden and Balaam's ass speak. Without going into the entire story, we note that when she was beaten by her master for pausing on the trail, Balaam's ass "defended herself by saying that she had seen an angel of the Lord" (Numbers 22:28, 22:30) . . . "According to Jewish tradition, Balaam's ass . . . was carefully nourished and kept in a secluded place, for she was destined to play a special role in Jewish history; she was to carry the long-awaited Messiah, who would go forth to rule the earth" (1974:93). Also, "According to legend, there were other burros who spoke in human tongue, among them a burro owned by the Queen of Sheba; and the burro of Bethpage who carried Jesus into Jerusalem" (1974:95).

The further history of the burro, as recounted by Brookshier, is extensive, and interesting, but beyond the scope of the point being made here. What we need to consider here are Brookshier's comments from his pages 93 and 95; in particular his comments about "Balaam's ass," and "the burro of Bethpage," for it is these specific burros who spoke, and that are directly associated with the Jewish Messiah, whom Christians equate with Christ (but Jews do not). In fact, it appears that the painting of the burro at Burro Flats represent either Balaam's ass, who ". . . was to carry the long-awaited Messiah," (and who, in Christian mythology, carried the pregnant Mary to Bethlehem), or perhaps the burro of Bethpage, who ". . . carried Jesus into Jerusalem."

This is not to suggest that the person that named Burro Flats and/or painted the burro at Burro Flats was aware of all of these nuances- certainly not. But the general subject was part of the catholic culture that person came from. For people that were familiar with burros in their own lives, the burros mentioned in the Bible would have created a connection that most of cannot appreciate today.

In any event, we can say that burros are, at the very least, very special and important to people all over the world, and this has been the case for 1000's of years. And that situation was the case in the Simi Hills, some 200 years ago. We have seen that Judeo-Christian religious tradition frequently mention burros in general, and also mentions some very specific burros, who are associated with divinity. And one of these burros, as Juan Menendez told JP Harrington in 1917, visited Sky Valley with *El Senor*, with *our savior*, only a little while after the land was separated from the waters (Genesis 1:9, etc.). It therefore seems to be the case that the name Burro Flats, and the burro painting that is located there, are metaphors for divinity, and that Burro Flats was considered to be a sacred place. In other words, "Burro Flats" is a word-avoidance circumlocution, so that the speaker can avoid saying the word "God," as that was considered to be impolite, in times past. The burro painting and the place-name *Burro Flats*, are therefore allusions for *El Senor*/our savior. And given this, it is the author's opinion that the Burro Flats Burro Pictograph site was a historic Catholic shrine, which was visited by members of the local Native American/mixed race community.

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Commenter No. 141 (cont'd): Albert Knight

I also note that the near-by Burro Flats Painted Cave, which is listed on the National Register of Historic Places, was a sacred place for the Chumash people and their neighbors for 100s, if not 1000s, of years (Knight 2012, 2016a, 2016b, 2017), and it seems likely (to the author) that the Burro Flats Burro Pictograph site represents a historic continuation of a very long-standing Native American tradition, abet with a historic-catholic aspect. Again, I point all of this out because I do not want to see the Burro Flats area needlessly destroyed by an over-zealous, un-necessary, clean-up: Burro Flats is a sacred place and has been so-recognized for 1000s of years- it should be given the respect and the protection that it deserves.

And, finally, Figure 5 shows the author's wife Mary, visiting with some burros at Oatman, Arizona, where a dozen or so are allowed (yeah, encouraged) to wander through town, for the amusement of the tourists.



Figure 5

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Commenter No. 141 (cont'd): Albert Knight

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Commenter No. 142: Scott Kovac
Nuclear Watch New Mexico



April 13, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Comments on the Department of Energy's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory

Dear Ms. Jennings:

Nuclear Watch New Mexico seeks to promote safety and environmental protection at nuclear facilities; mission diversification away from nuclear weapons programs; greater accountability and cleanup in the nation-wide nuclear weapons complex; and consistent U.S. leadership toward a world free of nuclear weapons.

The long-delayed cleanup of the Santa Susana Field Laboratory (SSFL) is a familiar story to us. It goes like this: DOE operations release dangerous nuclear and chemical contamination into the environment, impacting both workers and neighboring communities. DOE minimizes the contamination and its impact on health, and drags its feet for decades on cleanup. DOE signs cleanup agreements that it does not keep, and DOE sites remain contaminated.

Troubling issues regarding the SSFL cleanup were brought to our attention in August 2016, when we learned that while DOE broke its contract to fund the Community Involvement Fund of the New Mexico Community Foundation, it simultaneously funded a front group that lobbies against the SSFL cleanup. Funding from CIF was critical to several ANA groups, who were appalled by DOE's conduct in the matter. Now more fully informed about the SSFL cleanup, we are pleased to submit comments on DOE's DEIS for the site.

SSFL was the site of nuclear activities that have left a legacy of contamination. SSFL once housed 10 nuclear reactors, one of which had a partial meltdown in 1959, and two others suffered accidents as well. A "Hot Lab" to cut up irradiated fuel from around the country was also sited at SSFL, as well as plutonium and uranium-carbide fuel fabrication facilities and a sodium burn pit used for open-air burning of contaminated reactor components. SSFL's soil, groundwater, and surface water are contaminated, and this contamination has migrated off-site putting nearby communities at risk. Federal studies indicate elevated cancers among both workers and off-site populations near SSFL.

In 2010, DOE finally signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substances Control to clean up its operational area at SSFL to background levels of contamination. In 2012, DOE issued a notice entitled, "Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement." In it, DOE stated that it was committed to the AOC and that its

Nuclear Watch New Mexico * 903 W. Alameda #325 * Santa Fe, NM 87501

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The mission of DOE is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions. Additional information can be found at <https://energy.gov>. As the largest environmental cleanup program in the world, DOE's Office of Environmental Management has been charged with the responsibility of cleaning up 107 sites across the country. To date, the Office of Environmental Management has made substantial progress in nearly every area of nuclear waste cleanup and completed cleanup at 91 of these sites. Additional information can be found at <https://energy.gov/em/office-environmental-management>. DOE conducted historic operations under the laws and regulations applicable at the time.

While the comment is not on the scope or content of this Final EIS the following information is being provided.

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an

Commenter No. 142 (cont'd): Scott Kovac
Nuclear Watch New Mexico

EIS would be limited to an examination of alternate ways to achieve the AOC cleanup standard. In 2014, DOE stated that its DEIS would be completed later that year, and projected that it would meet the 2017 deadline stipulated in the AOC for the cleanup to be complete.

Unfortunately, the cleanup has yet to begin. DOE's DEIS was just released at the beginning of this year, and not one of the four alternatives proposed in it comply with the AOC cleanup agreement.

Despite the AOC barring leave in place options, DOE's first alternative proposes not cleaning up 480,000 cubic yards of contaminated soil, which DOE preemptively excludes citing potential exemptions that do not meet the narrow exemptions permitted in the AOC. The second alternative proposes to leave in place up to a million cubic yards of contaminated soil by using a suburban residential risk-based cleanup that omits the required backyard garden component of a residential cleanup level. The third alternative proposes to not clean up as much as 99% of the contaminated soil, allowing radioactivity levels hundreds of thousands of times higher than the U.S. Environmental Protection Agency's preliminary remediation goals. The fourth alternative proposes no cleanup at all.

DOE's DEIS also does not acknowledge that DOE does not have the authority to make the decisions about how much contamination gets cleaned up. For chemicals, under the Resource Conservation and Recovery Act, that decision is made by DOE's regulator, the DTSC. For radiological contaminants, DTSC is also the regulator as stipulated in the AOC.

Nuclear Watch New Mexico recommends that DOE revise its EIS to be fully compliant with the AOC cleanup agreement that it signed, and that it proceed to do so without delay. Communities living near SSFL have waited too long for the promised cleanup to occur.

Sincerely,

Scott Kovac
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independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013. The grant to the CAG was funded through local project funds in an effort to support community engagement. DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards.

DOE's Office of Environmental Management started the Community Involvement Fund (CIF) to increase public involvement in the environmental management decision-making process and assist stakeholder groups with analyzing environmental management plans and proposals. The CIF operated from late 2010 until September 2015, and distributed a total of \$1.6 million through 46 grants to 23 recipients around the country, including groups involved in observing SSFL cleanup preparation. These included:

- \$46,800 in 2011 to the Committee to Bridge the Gap.
- \$55,000 in 2012 to the SSFL Advisory Panel, partnering with the Committee to Bridge the Gap. The SSFL Advisory Board is not related to the SSFL CAG.
- \$23,000 in 2013 to Physicians for Social Responsibility – Los Angeles, partnering with the Rocketdyne Cleanup Coalition, Teens Against Toxins and Committee to Bridge the Gap.
- \$20,000 in 2014 to Physicians for Social Responsibility – Los Angeles, partnering with Teens Against Toxins and the SSFL Work Group, which is not related to the SSFL CAG.

- 142-3 Please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have

Commenter No. 142 (cont'd): Scott Kovac
Nuclear Watch New Mexico

examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

142-4 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

142-5 DOE recognizes DTSC's authority with respect to the AOC and the Resource Conservation and Recovery Act. In order for cleanup to begin, DTSC first needs to complete its Environmental Impact Report developed under the California Environmental Quality Act (the Draft Program *Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 [DTSC 2017b]) and issue its findings.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions.

The Area IV and NBZ site cleanup activities covered by this Final EIS would begin following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 143: Anonymous

I implore the U.S. Department of Energy "DOE" to fully cleanup the SSFL site contamination as the DOE agreed to, and signed, in the 2010 Administrative Order on Consent "AOC". It is not all right for the DOE to renege on the AOC agreement by changing the terms and compromising the health and well-being of residents, and may I say many future generations, in all nearby communities. The site must be cleaned up fully and completely to remove all detectable contamination!

The 4 EIS proposals presented by the DOE are NOT in compliance with the 2010 signed AOC. To leave ANY of the detectable contamination in place allows for the contamination to adversely affect and impact communities that are nearby.

In 1994 when my husband and I married, we moved into our home on Appleton Road in Simi Valley. We are in close proximity to the SSFL when the wind radius is taken into account, and we live just down the street from Runkle Canyon. We have 2 sons. Three years ago one son was diagnosed with a chronic thyroid condition at the age of 15. I am extremely worried about him. There are contaminants at the site that are known to cause thyroid health issues. When the rocket engines were being tested, we would hear the extremely loud rumble of the rocket engines, and at those times, our windows would rattle and shake.

The name "Simi" means windy, and Simi Valley is a windy city. Hazardous contaminants at the SSFL can easily blow in the wind in any direction. Hazardous contaminants can easily run downhill from the SSFL when it rains. To leave any detectable contaminants at the SSFL would absolutely be the wrong action to take.

There are some who want to preserve, in place, the rocket engine test stands and the Chumash Indian paintings that are on the grounds of the SSFL. I am not one of them. If that is done, the DOE would not be removing the detectable contaminants under and around those test stands and the Indian paintings. That is not acceptable! People presently living, and future generations to come, are immeasurably more valuable than the rocket engine test stands and the Chumash paintings. Make replica stands and put those replicas somewhere else to be viewed. Have a government photographer photograph the Chumash paintings to preserve what those paintings look like before they are removed from the site. I recognize that the rocket engine test stands and the Chumash paintings are a part of history. I surely hope though that the DOE does not take the position that the rocket engine test stands and Chumash paintings are more important and valuable than human lives!!

The DOE needs to concentrate on how it is going to completely cleanup the detectable contaminants at the SSFL rather than on how much of the site's contaminants it is going to cleanup or whether it will do any cleanup!

The DOE must abide by the AOC to cleanup ALL detectable contamination. It is the U.S. Federal government's duty to protect its citizens. It is the U.S. federal government that was involved with the SSFL nuclear site as well as the testing of the rocket engines. With the nuclear meltdown of many years ago, it is the U.S. federal government DOE that has the responsibility to clean it up. It has been way too many years already that residents in the surrounding communities have been exposed to the hazardous contaminants. Cleanup should have been done long ago. It still needs to be done!

To those in the DOE who have decision power regarding the cleanup of the SSFL site, I ask "If you lived close by the SSFL site, would you want yourself and your family and generations that follow to be continually exposed to hazardous contaminants that can cause horrific health conditions?"

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143-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. In this EIS, DOE does not propose to breach the 2010 AOC signed with its regulator, DTSC. However, NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

143-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

However, as indicated in Chapter 1, Section 1.3, there are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of this work. Each of the three parties is responsible to remediate the areas where its work was performed. The test stands and most of the Chumash paintings referred to in the comment are not within Area IV or the NBZ where DOE has cleanup responsibility. Regarding the exemption areas proposed by DOE in this EIS, if there is contamination in those areas that poses a risk to human health or the environment, it would be subject to a carefully planned and focused cleanup; please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD.

143-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 143 (cont'd): Anonymous

To do nothing in the way of cleanup or only partially cleanup the SSFL site is absolutely NOT acceptable. All detectable contamination must be removed as per the 2010 AOC which was agreed to and signed by the U.S. Department of Energy!!

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Commenter No. 144: Dr. Sheldon C. Plotkin
Southern California Federation of Scientists

This testimony was interrupted because it exceeded the minimal time limit for public comment. This document is being submitted so that the full statement may be on the record.

Testimony of Dr. Sheldon C. Plotkin
Southern California Federation of Scientists
Hearing on the DOE Draft EIS for Santa Susana Cleanup
February 18, 2017

I am Dr. Sheldon C. Plotkin and am appearing here on behalf of the Southern California Federation of Scientists, which has been involved for nearly forty years in trying to get the Department of Energy to take responsibility for the contamination it created at Santa Susana and clean it up. We are deeply concerned that DOE has once again demonstrated that its word cannot be trusted and that it has now broken the legally binding cleanup agreement it signed in 2010.

DOE and its predecessor agency, the Atomic Energy Commission, historically acted as if they were above the environmental laws of the country that apply to everyone else. They consistently broke fundamental rules about protecting the environment, ending up polluting soil, water and air at scores of nuclear facilities around the country.

At Santa Susana, elementary safety rules were ignored. Four different reactors suffered accidents. In 1959, one reactor released radioactivity. A few months later, a different reactor suffered a partial meltdown in which a third of the fuel experienced melting. Essential safety rules were simply ignored. In that case, after an accident in which power ran out of control exponentially, and they could barely shut the reactor down, they inexplicably started it up again a couple of hours later without having been able to identify the cause of the problem. They ran for another ten days or so, in the face of clear evidence of a failing reactor, with radiation readings so high that they went off scale; in other words, radiation levels higher than the monitors could record. Radioactive material was intentionally released into the environment for weeks. And then true to pattern, they lied about the accident and tried to cover it up.

In 1964 another reactor had a very similar accident, where they pushed it to keep running for a year in the face of clear evidence that the fuel was failing. 80% of the fuel was damaged. A few years later sloppy safety practices led to another accident, where again they kept running it for many months with failing fuel, leading to a third of the core being damaged.

There were radioactive fires at the "hot lab" where highly irradiated nuclear fuel was disassembled. And for decades they illegally burned radioactive and toxic chemical wastes in open burn pits, with the contamination released into the air over Simi Valley and polluted water dumped over the hillside to a children's camp.

DOE failed to follow protective procedures and failed to tell the truth. This is DOE's long history throughout the country. After SSFL was closed down, there were hopes there might

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144-1 DOE has not announced that it intends to break the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

144-2 DOE conducted historic operations under the laws and regulations applicable at the time. DOE's Office of Environmental Management has been charged with the responsibility of cleaning up 107 sites across the country. To date, the Office of Environmental Management has made substantial progress in nearly every area of nuclear waste cleanup and completed cleanup at 91 of these sites. Additional information can be found at <https://energy.gov/em/office-environmental-management>.

144-3 As indicated in Chapter 1 of this EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater. Chapter 1, Section 1.3, contains a brief history of activities at SSFL and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV at SSFL can be found at <http://www.etec.energy.gov/>. Chapter 3, Sections 3.9.5 and 3.9.6, of the EIS contain information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. At the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. Additional information about the 1959 SRE accident can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html. With respect to the

**Commenter No. 144 (cont'd): Dr. Sheldon C. Plotkin,
Southern California Federation of Scientists**

be a change in attitude and DOE would act responsibly and honestly to clean the site up. But it dragged its feet for decades. Finally, in 2010, it signed a legally binding agreement with California for a full cleanup. But today, DOE has announced it intends to break that agreement and instead of cleaning up all the contamination, as required by the agreement, proposes four options, each of which violates the AOC. One option would leave in place 39% of the contamination, a second would leave 91%, a third would leave 99%, and the last would leave it none of it cleaned up.

This is unacceptable. DOE contaminated the site. DOE promised to clean up all the contamination. DOE must live up to its cleanup obligations and carry out the cleanup agreement to the letter, with no more games, no more false statements, and no more breach of the public trust.

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statements regarding burning radioactive and chemical waste in open pits, the Former Sodium Disposal Facility was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The facility was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). Additional information can be found at http://www.etec.energy.gov/Operations/Support_Ops/FSDF.html. With respect to the statements regarding polluted water being dumped over a hillside, studies have addressed whether radiological and chemical contaminants were present on the properties north of SSFL, including studies issued in 1992, 1994, and 1995 (see http://www.etec.energy.gov/Environmental_and_Health/Brandeis_Bardin.html). These studies led to cleanup activities on part of the American Jewish University Brandeis Bardin property, and purchase by Boeing of what is termed the Northern Buffer Zone. These areas were incorporated into the SSFL site (DTSC 2017a). In May 2017, DTSC published its review of chemical and radiological data from the investigations that had been performed to date. From its review, DTSC concluded that: (1) levels of radionuclides on the Brandeis Bardin Campus appear to be within the natural background range; (2) levels of chemicals and radionuclides at the Brandeis Bardin Campus do not pose a threat to human health; (3) contamination at SSFL does not pose a threat to Brandeis Bardin Campus users; and (4) the Brandeis Bardin Campus is safe for use by campers, visitors, students, faculty, administrators, and staff (DTSC 2017a). DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, please see Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response. This Final EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. This EIS will inform DOE decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste.

Commenter No. 145: Betsey Landis, Vice President,
Los Angeles/Santa Monica Mountains Chapter,
California Native Plant Society

California Native Plant Society

Los Angeles / Santa Monica Mountains Chapter
3908 Mandeville Canyon Road, Los Angeles, California 90049
April 13, 2017

Stephie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, California 93063
<http://www.SSFLAreaIVEIS.com>

RE: DEIS for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Stephanie Jennings:

Representing California Native Plant Society, I participated in the Community Meetings on alternatives for this DEIS. I was in the "Orange" Group, which provided an alternative that was more restrictive in some ways than what is labeled "Conservation of Natural Resources" in that less soil was to be removed and, if there were any clean buildings or building materials, that they be used to construct a museum and visitor center because of the long and very interesting cultural and historical uses of the Santa Susana Field Lab site. I also testified at the Van Nuys public hearing on the DEIS.

Further comments from reviewing the Draft Environmental Impact Statement (DEIS) for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (SSFL):

1) CNPS does not support the restrictions on levels of contaminants in the 2010 AOC or the Revised LUT values, though the revised LUT values are somewhat less restrictive. At the present time, measuring equipment and chemical tests used on field soil samples are not capable of the accuracy and repeatability required by the AOC and LUT tables. Please use toxicity tables provided by EPA or the State of California Department of Public Health. Only the most highly contaminated soil should be removed from the site.

2) The presence of strontium in the fractured bedrock is a serious problem. However, due to the very active geology in the Simi Hills and San Fernando Valley, using grout to enclose the strontium in the bedrock seems doomed to failure. In this case, removal of the bedrock in that one location may be a more permanent solution. Not having to dig it out every few years will allow native habitat to establish there, perhaps a marsh or watering hole for wildlife if the remaining bedrock is sound.

3) At the public hearing, I mentioned that CalRecycle, which regulates solid waste for the state of California, was about to order that green waste, wood waste, food waste, and other materials CalRecycle defined as "organic" would no longer be accepted at landfills in California. Instead, this "organic" waste could be mulched, chipped and ground, composted or converted through anaerobic digestion into energy. There are many problems to be resolved to make this work, but, for DOE, it means you might have to send your green waste out of state or process it on site. I suggest that DOE consider using chopped up green waste as a ground cover to control dust and use the chipped and ground material (which is more powdery) in the nursery as part of a composting facility. That way you recycle the local green waste and wood waste into ground cover or soil amendment. Having a nursery on site was mentioned in Chapter 6 (page 6-7) as part of the restoration of native plants and native plant habitat in areas that have been highly disturbed.

CNPS Comments on DOE DEIS 4/13/2017, page 1

145-1

145-2

145-3

- 145-1 DOE acknowledges your opposition to the Cleanup to AOC LUT Values and Cleanup to Revised LUT Values Alternatives, and your preference for removal of only the most highly contaminated soil. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD, for further discussion of this topic.
- 145-2 DOE recognizes your preference for the removal of bedrock containing strontium-90 rather than options, such as using grout, to contain the strontium-90 within the bedrock. As described in Chapter 2, Section 2.6.3 of this Final EIS, removal of the subsurface bedrock impacted by strontium-90 is one alternative considered in this EIS. (Grouting of the bedrock containing strontium-90 is not being considered as a remedy, as there is no realistic mechanism of injecting grout into solid bedrock.) If this alternative is chosen and implemented, the resulting excavation would need to be backfilled. For purposes of analysis in this EIS, DOE has estimated that 2,300 cubic yards of backfill soil would be needed to fill this excavation. The *Draft RCRA Facility Investigation Groundwater Investigation Report for Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a) and *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) were completed after the issuance of the Draft EIS. This Final EIS includes revised text; Chapter 2, Section 2.6 and Chapter 4, Section 4.4.3.3; to incorporate relevant information and the findings of the remedy evaluations.
- 145-3 DOE will not speculate regarding new regulations, but will comply with all applicable regulations, including any new regulations that may be enacted.
- 145-4 The Conservation of Natural Resources Alternative focuses soil cleanup on the

**Commenter No. 145 (cont'd): Betsey Landis, Vice President,
Los Angeles/Santa Monica Mountains Chapter,
California Native Plant Society**

4) CNPS supports focused soil removal actions in order to minimize soil loss and habitat disturbance. The DEIS maps clearly show that contaminants are concentrated in relatively small areas, many associated with buildings or leach fields near buildings. The Conservation of Natural Resources alternative is not focused enough and calls for the removal of too much soil.

145-4

5) From the maps in the DEIS, it appears that Braunton's milkvetch (*Astragalus brauntonii*), Santa Susana tarweed (*Deinandra minthornii*) and other listed native plant species will be protected if only focused soil removal is done. Having a botanist on site harvesting native plant seeds, growing them in a nursery for replanting them as areas on site become available is an excellent action plan.

145-5

6) CNPS is concerned about having years of heavy traffic on Woolsey Canyon Road, not to mention Valley Circle. Woolsey Canyon Road winds steeply down the side of Woolsey Canyon, which is a natural wooded canyon. Any heavy truck going off the road there is liable to create a major high-hazard, possibly fiery accident that will be a tragedy, not only for the driver, but for the canyon native habitat. I have noticed that the years of drought have caused areas of the pavement on Woolsey Canyon to pull apart. The road needs repair, perhaps a new roadbed, before this project goes forward with moving thousands of tons of soil offsite.

145-6

7) CNPS supports the use of natural attenuation, the use of bioswales in filtering stormwater, the use of native plants in a multitude of locations to stabilize slopes and restore cleared areas. The number of native habitats listed is large because of the highly diverse topography of Santa Susana Field Lab. By collecting seeds from every area, the onsite nursery should have native plants for each focused clean-up area.

145-7

8) In Chapter 7, there is a Table on Green and Sustainable Remediation, Best Management Practices. It has lines discussing the use of "plants" compatible with the location or drought-tolerant. Please correct that section to read "native plants" and elsewhere when "plants" are mentioned as part of Best Management Practices. Santa Susana Lab is not urban. The site is a beautifully rich confluence of many native species of plants and wildlife. That should be recognized and celebrated throughout this EIS.

145-8

That is your Best Management Practice.

Sincerely,

Betsey Landis
Vice President
Los Angeles / Santa Monica Mountains Chapter
California Native Plant Society

locations in Area IV where concentrations of soil contaminants posing human health or ecological risks exist. This alternative only removes soil that has been determined to pose a threat to human health or the environment. The process that will be used for soil removal is one that has been developed through discussions with USFWS and CDFW, and USFWS incorporated it into its Biological Opinion. It results in the removal of between 38,000 and 52,000 cubic yards of soil affecting 9 to 10 acres (versus 881,000 cubic yards affecting 150 acres in the Cleanup to AOC LUT Values Alternative). In all of these areas, at least one contaminant can be found in concentrations exceeding risk-based cleanup criteria. It is similar to the type of soil cleanup conducted by EPA nationwide. Regardless of the alternative implemented by DOE, DOE would use measures that would protect and minimize impacts to endangered and protected species. The process and controls that will be used to minimize impacts to federally protected T&E species are described in the U.S. Fish and Wildlife Biological Opinion (see Appendix J of this EIS). The purpose of biological exemption areas is to minimize impacts to resources within these areas. Therefore, if there were no chemicals or radioactive constituents within these areas that posed a risk to public health or the environment, the areas would not be disturbed and the impacts would be zero. However, if levels of constituents in these areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals that would minimize impacts.

145-5

Protecting sensitive plants, including Braunton's milkvetch (*Astragalus brauntonii*) and Santa Susana tarweed (*Deinandra minthornii*), emphasized in your comment is integral to the exemption process worked out with USFWS and described in the EIS. The protection of sensitive plants is the intent of the identification of biological exemption areas and the focused removal of soils within these areas. As indicated in Chapter 6 of this EIS among the minimization measure (Minimization Measure 5-6 [Biological Resources – Special Status species, including Braunton's milk-vetch, Santa Susana tarplant, and non-vascular plants]) to reduce the impacts to affected species/habitats DOE would consider, when feasible, the harvesting, growing and replanting of native seeds.

145-6

DOE acknowledges that increased truck traffic on Woolsey Canyon Road would result in an increased risk of traffic accidents which could be harmful to people or property, and increased potential for damage to road pavement due to passage of heavy trucks. Chapter 3, Section 3.8.2.1, of the EIS acknowledges that the pavement of Woolsey Canyon Road is showing signs of age and brittleness indicating that the pavement

Commenter No. 145 (cont'd): Betsey Landis, Vice President,
Los Angeles/Santa Monica Mountains Chapter,
California Native Plant Society

is near the end of its useful life. The potential for damage to pavement on roads in the SSFL area is evaluated in Chapter 4, Section 4.8.2, of the EIS. Also refer to the response to comment 162-6.

- 145-7 DOE notes your support for natural attenuation, the bioswales for filtering stormwater, and native plants to stabilize slopes and restore cleared areas. As stated in response to comment 145-5, when feasible native plant seeds will be harvested, grown and replanted.
- 145-8 Thank you for your comment. The recommended change was incorporated in this Final EIS. In Table 7-1, the qualifier “native” preceding “plants” is added in the column “Applicability to Area IV Cleanup Activities” where appropriate. It is not added in the first column because this language is taken from the ASTM Best Management Practices.

**Commenter No. 146: Steven L. Shestag,
Director, Environment, Health & Safety, Boeing**



The Boeing Company
P.O. Box 3707
Seattle, WA 98124-2207

April 12, 2017
SS0417001

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

<http://ssflareaiveis.com/> (Comment Portal)

Subject: Comments of The Boeing Company on the Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone

Dear Ms. Jennings:

The Boeing Company (Boeing) appreciates the opportunity to submit these comments on the Draft Environmental Impact Statement (Draft EIS) for the Remediation of Area IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL) prepared by the U.S. Department of Energy (DOE) pursuant to the National Environmental Policy Act (NEPA).

Boeing supports a responsible cleanup of the SSFL that fully protects people, wildlife, habitat and cultural resources for the future use of this invaluable property as undeveloped open space. As the property owner of 2,400 acres of the SSFL, including Area IV and the Northern Buffer Zone, Boeing appreciates that the Draft EIS acknowledges there are alternative approaches to remediating Area IV and the Northern Buffer Zone that will be protective of human health and the environment, shorten the cleanup schedule, reduce impacts to adjacent communities, and limit damage to Santa Susana's unique biological and cultural resources.

NEPA provides the framework for evaluating how DOE's proposed action can best be accomplished at the SSFL site. As the landowner, Boeing plans to permanently preserve the property as open space and to impose legal restrictions on the property to bar any future development, including residential or agricultural use. Recreation is thus the only future use of the property, and a risk-based cleanup alternative that considers protection of the recreational user is necessary for reasoned and considered decision-making. With regard to the current alternatives, the Draft EIS unequivocally finds that the Cleanup to LUT Values alternative would result in significant environmental impacts on and degradation of the ecological values of the site with no appreciable benefit to human health.

146-1

146-1

DOE acknowledges your support for a risk-based cleanup alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

**Commenter No. 146 (cont'd): Steven L. Shestag,
Director, Environment, Health & Safety, Boeing**



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Boeing therefore urges DOE to develop and select a preferred alternative that achieves the purpose and need to protect human health and the environment, uses standard EPA risk assessment methodologies and protocols that are applied elsewhere in the State of California, minimizes cleanup-related impacts to the local community, fully takes into consideration how best to protect and preserve the unique biological and cultural resources at the site, and results in the fewest environmental impacts.

I. INTRODUCTION AND SUMMARY OF COMMENTS

Boeing supports DOE's effort to conduct a comprehensive NEPA evaluation of potential environmental impacts of its future cleanup activities at the SSFL: The purpose of NEPA is to help the public and public agency decision-makers to better understand the purpose and need for a government action, to ensure that the significant environmental impacts of the action are analyzed, and to set forth reasonable alternatives for achieving the purpose and need that will reduce significant impacts. *Lands Council v. McNair*, 629 F.3d 1070, 1075 (9th Cir. 2010) ("NEPA's purpose is twofold: (1) ensure that agencies carefully consider information about significant environmental impacts, and (2) guarantee that relevant information is available to the public."); 40 Code of Federal Regulations (CFR) Section 1502.13. To these ends, NEPA requires that an EIS "provide full and fair discussion of significant environmental impacts" and "inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." (40 CFR Section 1502.1.) NEPA also requires that an EIS evaluate a range of alternatives to achieve the purpose and need of the proposed action and to provide a basis for comparing the benefits of each alternative in light of its environmental impacts. (40 CFR Sections 1502.13, 1502.14.)

Boeing appreciates that DOE has taken these NEPA obligations seriously in preparing the Draft EIS.

The Draft EIS accurately reflects that the SSFL is an cultural and ecological treasure and that those resources must be considered when evaluating alternatives for cleanup: With unique natural scenic beauty and significant, virtually untouched areas, the SSFL represents a critical core ecological area in a region that has experienced extensive urban development and has a great need for preservation of intact, undeveloped, natural habitat. In particular, the SSFL is home to a number of special status species, numerous plant communities and native plant species. This includes at least 138 species of birds, as well as amphibians and terrestrial wildlife, along with bats, snakes and other wildlife, not to mention the mountain lion which requires large unbroken tracts of land to support its home range.

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146-2

146-2 Thank you for your comment. For further discussion, refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.

146-3

146-3 Thank you for your comment. DOE agrees that protection of cultural and ecological resources at SSFL is an important consideration when evaluating alternatives for cleanup:

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing



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Mountain Lion at SSFL Watering Guzzler (August 27, 2014)

The open space values of the site, in addition to the resource values, are also based on the site's key role as part of a rare and vital wildlife corridor in Southern California. In addition to mountain lions, other large mammals such as coyotes, bobcats and bears traverse the site and neighboring properties. The SSFL is the single largest parcel in Ventura County and vicinity linking vital wildlife habitat corridors, and is identified as critical connectivity habitat in certain local policies and pending legislation.¹ (See Draft EIS, page 3-5, and discussion of Rim of the Valley, and Figure 3-3.) The function of the SSFL as a key link in a wildlife corridor is evident from the fact that the property is situated between large contiguous areas of open space both to the north and to the south:

**146-3
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¹ The SSFL is being considered as part of efforts to adjust the boundary of the Santa Monica Mountains National Recreation Area to include the Rim of the Valley Corridor, and has been identified for inclusion in the Ventura County Wildlife Corridor Zoning Overlay.

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(Draft EIS, p. 3-167.)

The SSFL property also contains important cultural resources, including a large number of Native American archaeological sites of a possible sacred nature. Some of these archaeological areas may date from thousands of years ago, include cultural areas undisturbed by modern development, and afford a rare opportunity to conserve and study relatively pristine archaeologically significant areas.

Photographs of SSFL's Area IV and the surrounding vicinity depict the natural beauty of the site and demonstrate how SSFL open space links to the adjacent wildlife habitats as a part of a larger contiguous area.

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Director, Environment, Health & Safety, Boeing**



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Photograph of Area IV (February 28, 2017)



Photograph of Area IV and Northern Buffer Zone (March 2, 2017)

As protected, undeveloped open space, the SSFL would be a magnet for birders, rock climbers, and day hikers. Boeing's plan is for the property to be managed to protect these open space, recreational, and cultural values against residential or agricultural uses, while expanding community, academic and environmental group access to the site.

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Director, Environment, Health & Safety, Boeing**



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Boeing appreciates the special attention DOE has given to these biological and cultural resources areas in the Draft EIS, both by identifying specific exemption areas under the 2010 Administrative Order on Consent between DOE and the California Department of Toxic Substances Control (DTSC) (2010 AOC), and by identifying and evaluating cleanup alternatives that are fully protective of future human users but minimize harmful impacts and protect these important resources.

The Draft EIS appropriately recognizes that Boeing will permanently preserve the land as open space and will legally restrict the property to prevent future development, including residential or agricultural uses: The Draft EIS correctly states that Boeing has committed to preserving the SSFL as undeveloped open space, allowing the site to be preserved for its ecological and cultural values and providing public access to the site. (Draft EIS, p. S-6.) There will never be any homes, gardens, or any agricultural use on the property.²

The Draft EIS properly identifies the purpose and need as remediation of the site in a manner that is protective of human health and the environment, and risk-based alternatives are legally required in the EIS and must be considered by DOE in selecting the final remedy: An EIS is required to have a statement of purpose and need to explain why the proposed action is being pursued and to provide a basis for selecting among alternatives. An agency cannot define the purpose and need of a project in unreasonably narrow terms to avoid evaluating a range of reasonable alternatives. The Draft EIS properly identifies the purpose and need as remediation of the site in a manner that is protective of human health and the environment.

Under NEPA, the legitimacy of the purpose and need is reviewed based on the statutory context of the proposed action. Here, the purpose and need is consistent with the environmental laws and regulations that underlie the entire SSFL remediation project: Resource Conservation and Recovery Act (RCRA), Comprehensive Emergency Response and Compensation Act (CERCLA), and their California analogs, Hazardous Waste Control Law (HWCL) and Hazardous Substances Account Act (HSAA). The purpose of these laws is clear: protect human health and the environment.

Furthermore, these laws require that remediation be based on a realistic assessment of risks to human health and the environment that would result from the reasonably foreseeable future land use. As stated in the Draft EIS: "Most cleanups are based on a risk assessment that follows EPA guidance." (Draft EIS, p. 2-24.) Thus, DOE properly considered risk-based alternatives in the Draft EIS to meet the purpose and need, which consisted of a risk-based alternative using a residential receptor. In addition, however, given that the appropriate legal reference point for the protection of human health and the environment is the reasonably foreseeable future use of the property and given Boeing's commitment to preserve the property as open space, DOE should also evaluate an alternative that assesses risk based on a recreational user.

² While the Draft EIS evaluates a risk-based alternative based on a residential receptor, Boeing will impose legal restrictions to ensure there will never be any such residential use of the property.

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146-4

146-4 Thank you for your comment. It has been included in the Administrative Record for this EIS.

146-5

146-5 DOE is not aware of any requirement that "risk-based alternatives are legally required" in an EIS. Nonetheless, DOE agrees that the EIS properly identifies its purpose and need. Additionally, as discussed in Chapter 2, Section 2.3.3.1, of this EIS, DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC, and therefore, in keeping with its responsibilities under NEPA, DOE developed two alternatives that meet the purpose and need. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this EIS.

146-6

146-6 In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

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Director, Environment, Health & Safety, Boeing**



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The Draft EIS unequivocally finds that the Cleanup to AOC LUT Values alternative would result in significant environmental impacts, but with no appreciable benefit to human health compared to the other alternatives: As legally required and consistent with the overarching purposes of NEPA, the Draft EIS describes the potentially significant environmental impacts associated with each of the alternatives to provide a basis for comparing the benefits of each in light of its environmental impacts. The Draft EIS also provides a detailed analysis of the technical challenges in implementing an AOC LUT cleanup, including indefensible cleanup values, false positives resulting in the remediation of clean soil, and the inability to find backfill soil that could meet AOC LUT values and/or support reestablishment of native vegetation. These technical challenges appropriately led DOE to evaluate other action alternatives.

The significant environmental impacts of the Cleanup to AOC LUT Values alternative would be devastating. This alternative would profoundly disturb natural resources and ecosystems, wildlife habitat and wildlife corridors, and damage for decades – and perhaps permanently – these important environmental resources. The activities that would cause this impact include removal of vegetation from 51 acres of “relatively undisturbed native habitats” where “it is unlikely that restoration and revegetation would result in habitat functionally equivalent to preexisting native vegetation.” (Draft EIS, p. 4-57.) Importantly, the Draft EIS concludes that the Cleanup to AOC LUT Values alternatives results in no appreciable benefit to human health compared to the other less destructive alternatives. (Draft EIS, p. S-97 (Cleanup to AOC LUT Values alternative results in “minimal reduction in human health risk”).)

This clear and straightforward communication of the comparable benefits and environmental impacts of alternatives is precisely the purpose of NEPA: making sure that decision-makers and the public clearly understand the implications of the choice among alternatives.

Preferred Alternative: NEPA mandates that the EIS provide decision-makers and the public with information on the relative risks and benefits associated with a cleanup that seeks both to ensure protection of human health and protection of the significant natural resource values at the site. For all of the reasons described above and as further explained in this letter, Boeing cannot support the Cleanup to AOC LUT Values alternative. **We urge DOE to develop and select a preferred alternative that achieves the purpose and need to protect human health and the environment, applies standard EPA risk assessment methodologies and protocols, minimizes impacts to the local community, fully takes into consideration how best to protect and preserve the unique biological and cultural resources at the site, and results in the fewest environmental impacts.**

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Director, Environment, Health & Safety, Boeing



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II. THE 2007 CONSENT ORDER FOR CORRECTIVE ACTION AND 2010 AOC ESTABLISH REMEDIAL ACTION REQUIREMENTS, INCLUDING CEQA AND NEPA COMPLIANCE, AND COMPELS A COMPREHENSIVE EVALUATION OF ALTERNATIVES

In 2007, DOE, Boeing and NASA entered into a comprehensive Consent Order for Corrective Action (2007 Consent Order) with DTSC that requires a site-wide investigation and protective cleanup of soil and groundwater based on standard state and federal practices for risk assessment. The 2010 AOC bypassed the normal investigative process and imposed additional requirements for DOE's cleanup of soils at the SSFL, while specifically identifying exemptions from these requirements for areas with biological and cultural resources.

As noted in the Draft EIS, SSFL cleanup activities will be evaluated in environmental documents prepared under NEPA, including this Draft EIS, as well as pursuant to the California Environmental Quality Act (CEQA). DTSC is in the process of preparing a facility-wide Environmental Impact Report (EIR) under CEQA as contemplated in the 2007 Consent Order.

Section 6.0 of the 2010 AOC explicitly acknowledges DOE's obligation to comply with NEPA, including the preparation of an EIS. As required by NEPA, DOE properly evaluated alternatives that do not rely solely on the AOC, recognizing that NEPA's requirements cannot be limited by the 2010 AOC. *Simmons v. United States Army Corps of Engineers*, 120 F.3d 664, 670 (7th Cir. 1997) (contract between city and water district with condition to meet environmental requirements cannot limit NEPA's mandate to evaluate alternatives). "The public interest in the environment cannot be limited by private agreements." *Id.*³

Moreover, the Draft EIS notes that some of the alternatives might require modifications to the 2010 AOC.⁴ The fact that the 2010 AOC sets out a proposed cleanup level cannot override NEPA's requirement that an EIS evaluate reasonable alternatives to that proposed action which would meet the purpose and need while minimizing environmental impacts. Indeed, as noted above, the 2010 AOC specifically acknowledges the requirement to comply with NEPA (and CEQA), and could not potentially eliminate the evaluation of alternatives unless the 2010 AOC itself had been reviewed under NEPA and CEQA before it was executed, and that never occurred. NEPA requires that an EIS include evaluation of reasonable alternatives, even if they conflict with lawfully established requirements.⁵ (40 CFR Section 1502.14(c).) NEPA has few limits when it comes to evaluating

³ While the 2010 AOC is fashioned in the nature of an enforcement order, the document is clearly a contractual agreement between DOE and DTSC because no state or federal law mandates the cleanup requirements set forth in the 2010 AOC, and required state and federal processes were not followed to determine the proposed final soils remedy. Furthermore, the state cannot *mandate* "more stringent cleanup procedures, not generally applicable within the state, to a particular site where the federal government undertook to clean up nuclear contamination." *Boeing vs. Movassaghi*, 768 F.3d 832 (9th Cir. 2014).

⁴ Section 8.0 anticipates that the 2010 AOC "may be modified by the mutual agreement of the parties."

⁵ *Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements* (2nd Ed., 2004), U.S. Department of Energy, Environment, Safety and Health Office of NEPA Policy and Compliance. ("Address reasonable alternatives that are outside DOE's

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Director, Environment, Health & Safety, Boeing**



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reasonable alternatives. In short, the 2010 AOC cannot serve as a basis for refusing to evaluate an alternative.

III. DOE PROPERLY DEFINED THE PURPOSE AND NEED OF THE EIS AS ENSURING PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT, REQUIRING AN EVALUATION OF RISK-BASED ALTERNATIVES

An EIS is required to have a statement of purpose and need to explain why the proposed action is being pursued and to provide a basis for selecting among alternatives. (40 CFR Sections 1502.13, 1502.14.) Given that the purpose and need dictates the range of reasonable alternatives, "an agency cannot define the purpose and need of a project in unreasonably narrow terms." *League of Wilderness Defenders-Blue Mts. Biodiversity Project v. United States Forest Serv.*, 689 F.3d 1060, 1069 (9th Cir. 2012). "In assessing the reasonableness of a purpose and need specified in an EIS, we must consider the statutory context of the federal action." *League of Wilderness*, p. 1070; see also *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 866 (9th Cir. 2004) ("[T]he statutory objectives of the project serve as a guide by which to determine the reasonableness of objectives outlined in an EIS.").

In this case, the proposed action is primarily based in the mandates of the federal Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. section 6901 *et seq.*, and its California analog, the Hazardous Waste Control Law ("HWCL"), Health and Safety Code section 25100 *et seq.* The action is also directed by the 2010 AOC between DOE and DTSC, which is based in part on DOE's authority under the federal Comprehensive Emergency Response and Compensation Act ("CERCLA"), 42 U.S.C. section 9601 *et seq.*, and California's authority under the Hazardous Substances Account Act ("HSAA"), Health and Safety Code section 25300 *et seq.* Because the impetus for DOE's proposed action is the 2007 Consent Order and the 2010 AOC, the objectives of applicable California law which underlie those agreements are of key importance. But because these state laws are implemented in coordination with their federal counterparts, both RCRA and CERCLA – as well as the extensive and long-standing guidance developed to implement remedial action under those statutes – are of central importance to the purpose and need of the action subject to analysis in this EIS.

The purpose of the HWCL is, *inter alia*, to "protect public health and the environment *and to conserve natural resources*." Health and Safety Code section 25101(a) (emphasis added). Orders for corrective action issued under the HWCL are premised upon "a substantial hazard to human health or the environment."⁶ The purpose of the HSAA, similarly, is to address sites that "pose a threat to the

jurisdiction, even if they conflict with lawfully established requirements (e.g., an alternative that could be reasonable if an existing law could be amended or if a regulatory agency granted a waiver.)"

⁶ Health and Safety Code section 25187.1(a)(1). RCRA similarly provides that regulating hazardous waste is essential to avoid "substantial risks to human health and the environment" (42 U.S.C. § 6901(b)(5)), and provides that its central objective is to "promote the protection of health and the environment." 42 U.S.C. § 6902(a).

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public health or the environment.” Health and Safety Code section 25301(a). A remedial action plan prepared under the HSAA must consider “health and safety risks posed by the conditions at the site” and the “effect . . . upon . . . contaminated, polluted, or threatened resources.”⁷

Based on this regulatory background, DOE therefore correctly identified the purpose and need of its action as guided by the objective of achieving protection of human health and the environment while minimizing impacts on natural resources:

“1.1 Purpose and Need for Agency Action

DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements. To this end, DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers.”

(Draft EIS, p. 1-1.)

Using this purpose and need, DOE appropriately developed screening criteria and balancing criteria (that incorporate RCRA standards) to identify the alternatives to be evaluated in the Draft EIS. Specifically, the main screening criteria in the Draft EIS are: 1) Regulatory Compliance; 2) Protect Public and Worker Health and Safety; 3) Effectiveness; and 4) Ease of Implementation. (Draft EIS, p. 2-6.) As stated in the Draft EIS, “[t]he screening criteria were developed to ensure the proposed alternatives would meet the purpose and need” (Draft EIS, p. 2-6.) DOE also identifies balancing criteria which include “principles for cleanup in a manner that is as environmentally sensitive as possible.” (Draft EIS, p. 2-6.) The balancing criteria are: 1) Protect the Environment; 2) Protect Native American Interests; 3) Cost; 4) Community Acceptance; 5) Return to Natural State; 6) Minimize Transportation Impacts; and 7) Preference for Onsite Treatment of Soils. (Draft EIS, p. 2-6.)⁸

⁷ Health and Safety Code section 25356.1(d)(1)-(2). CERCLA similarly provides that the agency shall “select a remedial action that is protective of human health and the environment.” 42 U.S.C. § 9621(b)(1). EPA’s “hazard ranking system” for purposes of determining whether a site is placed on the National Priority List must assess “the relative degree of risk to human health and the environment” posed by the site. 42 U.S.C. § 9605(e)(1). CERCLA also provides for liability for damage to natural resources. 42 U.S.C. § 9607(f).

⁸ RCRA’s three performance standards for final remedies (as opposed to interim remedies) are: 1) Protect human health and the environment based on reasonably foreseeable land uses; 2) Achieve media cleanup objectives, including media cleanup levels, points of compliance and remediation time frames; and 3) Remediate the sources of releases. RCRA’s seven balancing/evaluation criteria are: 1) Long-term effectiveness; 2) Toxicity, mobility and volume reduction; 3) Short-term effectiveness; 4) Implementability; 5) Cost; 6) Community acceptance; and 7) State acceptance (emphasis added). See, e.g., 61 Fed. Reg. 19,4932, 19,448-452, (May 1, 1996); EPA, Final Remedy Selection for Results-Based RCRA Corrective Action (Mar. 2000), <https://www.epa.gov/sites/production/files/2016-01/documents/select.pdf>; EPA, RCRA Corrective Action Training – Selecting and Approving a Protective Remedy, at 18-19 (Nov. 2009), <https://www.epa.gov/sites/production/files/2016-04/documents/mod7.pdf>.

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In this context, DOE acted to fulfill NEPA's mandate that an EIS "[r]igorously explore and objectively evaluate all reasonable alternatives" (40 CFR Section 1502.14.) CEQ regulations emphasize that the alternatives section is the heart of an EIS, and that NEPA requires that an EIS include an evaluation of reasonable alternatives to avoid or reduce potentially significant environmental impacts while meeting the purpose and need:

"The purpose of an environmental impact statement is to serve as an action-forcing device . . . It shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment."

(40 CFR Section 1502.1.)

IV. DOE APPROPRIATELY INCLUDED RISK-BASED ALTERNATIVES THAT WOULD REDUCE ADVERSE IMPACTS WHILE MEETING THE PURPOSE AND NEED

As described above, the Draft EIS acknowledges the substantial environmental harms that would result from performing the AOC LUT cleanup. DOE has taken its NEPA obligations seriously and properly included risk-based alternatives in the Draft EIS, which would not only reduce the significant adverse environmental effects from the Cleanup to AOC LUT Values alternative, but also meet the purpose and need – to clean up the affected environment in a manner that is protective of human health and the environment.⁹ "The additional action alternatives would meet the cleanup objectives to be protective of the environment and the health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values." (Draft EIS, p. S-1.)

V. THE EIS SHOULD INCLUDE A RISK-BASED ALTERNATIVE USING A RECREATIONAL USER

DOE decided not to examine an alternative based on an undeveloped open space land use assumption that evaluates the risk to a recreational user. (Draft EIS, p. S-18, Chapter 2.2.3 (Table 2-1) and

Appendix C, Table C-1). DOE states that its basis for not evaluating the recreational user scenario is to be "consistent with Boeing's basis for analysis." As noted in the Draft EIS, Boeing intends to preserve SSFL property as undeveloped open space, and has evaluated residential, recreational and

⁹ DTSC officials have testified under oath that there is no technical, scientific or environmental basis to single out the SSFL for more stringent cleanup procedures than apply to other contaminated sites in California. (Plaintiff The Boeing Company's Statement of Uncontroverted Facts and Conclusions of Law. Uncontroverted Fact 105, p. 56 (deposition testimony quoted in Statement; see, e.g., Brausch Deposition: ("Q. Can you identify any reason to conclude that the SSFL site should be cleaned up to a stricter standard than would be required under generally applicable State law? ... A. ... No.")), *The Boeing Company v. Movassaghi*, 768 F.3d 832 (9th Cir. 2014), filed February 28, 2011 in U.S. District Court, Central District of California, Case No. CV 10-04839-JFW.)

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146-7 Refer to Section 2.1, "Preferences for Cleanup," of this CRD, for a description of why DOE considered alternatives to the Cleanup to AOC LUT Values Alternative.

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146-8 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS was revised to reflect Boeing's conservation easements, its restriction measures, and adding a soil cleanup scenario under the Conservation of Natural Resources Alternative consistent with use as open space (e.g., exposure to a recreational user).

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ecological receptors in its technical analyses to date, even though the property will never be used for residential purposes.¹⁰

Both the U.S. Environmental Protection Agency (EPA) and DTSC guidance require remediation that is based on risks to human health and the environment in recognition of the reasonably foreseeable future land use. Response action criteria under the HSAA must include an assessment of risks to human health and the environment “for both current land use conditions and reasonably foreseeable future land use conditions at the site.” Health and Safety Code section 25356.1.5(d). Several EPA Directives articulate that CERCLA remedial actions, as well as corrective action under RCRA, should be based on risks that would attend the reasonably foreseeable future land use.¹¹ In the RCRA context in particular, for instance, EPA has repeatedly affirmed that future land use should guide development of remedial goals.¹² DTSC guidance similarly echoes the requirements of the Health and Safety Code, requiring consideration of reasonably foreseeable future land use in establishing cleanup objectives.¹³ The very court that considered SSFL cleanup standards referenced this requirement in determining the validity of a statute presumptively setting a different cleanup standard.¹⁴

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¹⁰ As such, the Draft EIS properly declines to evaluate impacts from a residential garden. (Draft EIS, p. 2-13.)

¹¹ See, e.g., U.S. EPA OSWER Directive No. 9355.7-04, Land Use in the CERCLA Remedy Selection Process (the “Land Use Directive”) (May 25, 1995), <https://epa.gov/sites/production/files/documents/landuse.pdf>. The Land Use Directive acknowledges that the factors governing remedy development should also inform remedy selection at RCRA sites and federally owned facilities. *Id.* at 1-3. The Land Use Directive explicitly recognizes that non-residential uses are appropriate in certain circumstances and that “EPA has been criticized for too often assuming that future use will be residential.” *Id.* at 3. See also OSWER Directive 9355.7-19, Considering Reasonably Anticipated Future Land Use and Reducing Barriers to Reuse and EPA-lead Superfund Remedial Sites (Mar. 17, 2010), <http://semspub.epa.gov/work/11/175563.pdf> (reaffirming Land Use Directive and other guidance).

¹² See, e.g., 61 Fed. Reg. 19,4932, 19452 (May 1, 1996) (Noting that “[r]easonable future land use assumptions should be assessed when developing remedial goals for any given facility and used to focus all aspects of the corrective action process” and that “the Agency believes that non-residential land use assumptions are appropriate for many corrective action facilities.”); EPA, RCRA Corrective Action Training – Selecting and Approving a Protective Remedy, at 6 (Nov. 2009), <https://www.epa.gov/sites/production/files/2016-04/documents/mod7.pdf> (“Establishing the current and reasonably anticipated land and groundwater uses is the first step in risk-based [corrective action]. It is necessary to establish the land and groundwater uses to determine actual and potential receptors, which in turn form the basis for establishing risk-based cleanup criteria.”).

¹³ DTSC, Land Use Covenant Agreements: LUC Agreements in California (“DTSC Factsheet”) (Oct. 2000), (“When selecting a remedy for a site, State and Federal laws require that: a) the chosen remedy must protect public health and the environment for the reasonably, anticipated future land use . . .”). <https://www.dtsc.ca.gov/LawsRegsPolicies/Regs/upload/luc-fact-sheet-10-00.pdf>.

¹⁴ *Boeing Co. v. Movassaghi*, 768 F.3d 832 (9th Cir. 2014) (discussed reasonably foreseeable land use in evaluating the validity of Health and Safety Code section 25359.20 (Added by Stats. 2007, c.729 (“SB 990”))). Before analyzing the key issues in the case (which concerned whether SB 990 conflicted with the Supremacy Clause), the Ninth Circuit observed that SB 990 attempted to impose a higher cleanup standard for the cleanup of all contaminants at the SSFL. Specifically, the court addressed Boeing, DOE, and NASA’s claim that SB 990 departed from “the usual practice under state and federal law of setting a cleanup level commensurate with a site’s reasonably foreseeable land use.” *Id.* at 837. The opinion then included a

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DOE also correctly references the reasonably foreseeable future use of the site as undeveloped open space. To better reflect applicable law, DOE should consider that the appropriate legal reference point for the protection of human health is the reasonably foreseeable future use of the property, i.e., a recreator, a change which would more appropriately inform the scope and reasonableness of the alternatives considered. Indeed, Boeing's RFI reports submitted to DTSC have considered both residential and recreational users along with ecological receptors with this same purpose in mind.

Given NEPA's requirements and these statutory and regulatory mandates, an open space alternative should be considered using risk-based levels for recreational and ecological receptors.

VI. THE DRAFT EIS UNEQUIVOCALLY SHOWS THAT THE CLEANUP TO AOC LUT VALUES ALTERNATIVE WOULD CAUSE UNACCEPTABLE IMPACTS TO NATURAL AND CULTURAL RESOURCES

NEPA requires an analysis of alternatives that may potentially reduce the environmental consequences of a proposed action. The Ninth Circuit Court of Appeals recently summarized these well-established NEPA requirements:

"An EIS must 'provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.' We review an EIS 'to ensure that the agency has taken a 'hard look' at the potential environmental consequences of [a] proposed action.'"

Backcountry Against Dumps v. Jewell, 2017 U.S. App. LEXIS 218, at *6, 2017 WL 56300 (9th Cir. Cal. Jan. 5, 2017).

DOE has taken a "hard look" at the environmental consequences of the Cleanup to AOC LUT Values alternative and the results of the analysis, as set forth in the Draft EIS, amply support DOE's decision to consider other alternatives that would reduce those impacts.

In particular, the Draft EIS recognizes that the SSFL is an ecological and cultural treasure that would be significantly impacted by implementation of the Cleanup to AOC LUT Values alternative. This conclusion is expressed in multiple locations in the Draft EIS, including in Section 4.5.1.2.1, which states in pertinent part:

footnote referring to Health & Safety Code section 25356.1.5(d) and some of the EPA guidance discussed above.

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As indicted in the comment, DOE evaluated alternatives to the proposed cleanup to 2010 AOC LUT values that would involve less excavation and soil removal and therefore fewer potential impacts on biological and cultural resources. These alternatives (the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative) recognized Boeing's stated future use of its property as open space. The cleanup levels for these two alternatives were based on risk to a suburban resident without a garden, which would also be protective of a recreational user. In its impact analysis, DOE did consider impacts to both a recreational user and a suburban resident without a garden. In this Final EIS, consistent with Boeing formalizing the commitment of this land to open space. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. DOE added a scenario under the Conservation of Natural Resources Alternative that establishes cleanup levels based on risks to a recreational user and ecological receptors.

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About 130 acres of vegetation and wildlife habitat would be removed outside the proposed exemption areas, about 28 percent of the total habitat in Area IV and the NBZ.... Where chemicals or radionuclides above AOC LUT values extend from the surface downward, there would be no opportunity to conserve the valuable uppermost soil layers or seedbank for later replacement as part of site restoration and revegetation. As discussed in Section 4.2.1.2, sources of backfill that meet AOC LUT values have not been identified. . . . Removal of existing vegetation and topsoil would increase the difficulty of re-establishing native plant species and reduce or eliminate the value of the habitat for most wildlife species during the process of re-establishing native vegetation and wildlife habitat. . . . Loss of habitat due to remediation would reduce wildlife species populations in the affected area and the local vicinity depending on the home range of the species. In addition, there would be mortality among less mobile species, which would be reduced by relocating individuals of sensitive species (e.g., coast horned lizard, a California Species of Special Concern) encountered during pre- construction surveys.

To summarize, this alternative would result in removal of vegetation and wildlife habitat over about 130 acres outside of the proposed exemption areas and an unquantified additional acreage within the proposed exemption areas, causing mortality and disturbance of wildlife within and adjacent to the affected area. The profound soil disturbance caused by remediation will require special measures to accomplish restoration of a self-sustaining native vegetation cover and sources of suitable clean soil for backfill where soil has been removed have not been identified. If backfill is substantially different than that originally present, it may not support vegetation similar to that present before development of Area IV. With implementation of habitat restoration and revegetation measures, as well as measures to reduce or avoid impacts on wildlife as described in Chapter 6, impacts would be reduced, but would remain substantial given the degree of habitat loss.

(Draft EIS, p. 4-38 - 4-39, emphasis added.)

The Cleanup to AOC LUT Values Alternative is also predicted to have significant impacts on traditional cultural resources, including impacts from disturbing the natural contours of the land and replacing it with unfamiliar topography, impacts from changes to the setting of the traditional cultural resource resulting from 10 years of soil removal across 130 acres, and impacts from potential vandalism by introducing more people to the area. (Draft EIS, p. 4-167 - 4-168.) Table 4-75 summarizes the potentially significant impacts to traditional cultural resources that could occur if the cleanup activities are not designed to ensure protection:

During 10 years of soil removal, adverse impacts on the integrity of traditional cultural resources are possible from changes in setting, augmented site access during remediation, disturbance of landscape (130 acres), and potential discovery of unanticipated archaeological sites.

(Draft EIS, p. 4-166.)

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In fact, as noted in the Draft EIS, “[t]he Santa Ynez Band of Chumash Indians, a federally recognized tribe, has designated the entire SSFL as a Native American sacred site (referred to herein as the Santa Susana Sacred Site) and believes that the site is eligible for inclusion on the NRHP as a traditional cultural property.” (Draft EIS, p. 3-141.) In its draft nomination form for recognition of the SSFL as a Traditional Cultural Landscape,¹⁵ the Santa Ynez Band of Chumash Indians made the following statement:

All of those who have had the opportunity to visit agree that the Burro Flats Painted Cave and the surrounding Santa Susana Field Laboratory (where numerous Native American sites are now known to exist) are part of a large and important Traditional Cultural Landscape. Today, many indigenous people consider the Burro Flats Painted Cave to be a very important shrine site, and feel strongly that it and the surrounding area are important to their culture. It is for this reason that the Elder’s Council of the Santa Ynez Band of Chumash Indians has requested that the entire former Santa Susana Field Lab be described as the Santa Susana Sacred Sites and Traditional Cultural Property, by the State of California.

The Draft EIS affords protection to these biological and cultural resources through the identification of the exemption areas allowed under the 2010 AOC which are to be “protected under any of the soil remediation alternatives.” (Draft EIS, p. 2-18.) The Draft EIS explains the remediation process for these areas:

DOE would not take action in any of these areas unless it is demonstrated that levels of chemical or radioactive constituents in the soil pose a risk to human health or the environment, as determined using risk-based screening levels (RBSLs) from the SRAM (MWS 2014).

(Draft EIS, p. 2-18.) Boeing supports DOE’s efforts to protect these important resources.

However, for purposes of NEPA, the potential impacts from disturbance to biological or cultural resources in the 2010 AOC exemption areas are currently unknown, but could also be significant. The 2010 AOC biological and cultural exemption areas total 220 acres, of which 101 acres contain chemical or radioactive materials exceeding AOC LUT values. The amount of disturbance has not yet been determined and will be based on the results of consultations with DTSC, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, State Historic Preservation Officer (SHPO) and the SSFL Sacred Sites Council. (Draft EIS, pp. 4-57 – 4-58.) As such, the Draft EIS excludes these areas in evaluating impacts to biological and cultural resources under all of the soil

¹⁵ The Draft EIS includes the following information on Traditional Cultural Properties: “*Traditional cultural properties* are resources that are associated with the cultural practices or beliefs of a living community, that link the community to its past and are ‘important in maintaining the continuing cultural identity of the community’, and that are eligible for or are listed on the NRHP (DOI 1998). Most traditional cultural resources or sacred sites in the SSFL region are associated with Native Americans. Traditional cultural properties or resources may also be associated with other traditional lifeways, such as agriculture. Traditional cultural properties can include archaeological resources, locations of pre-contact or post contact events, sacred areas, sources of raw materials used in the manufacture of tools and/or sacred objects, certain plants, traditional hunting and gathering areas, or landscapes (NPS 1998).” (Draft EIS, p. 3-135.)

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remediation alternatives. (Draft EIS, p. 2-18.) However, up to an additional 101 acres containing important biological or cultural resources could be disturbed depending on how the 2010 AOC exemption areas are interpreted by regulatory authorities.

These conclusions of the Draft EIS regarding impacts to biological and cultural resources speak for themselves. They also underscore the importance of thoroughly evaluating a reasonable range of alternatives, including alternatives that accurately reflect the actual future use of the property as open space and that provide for a soil cleanup using a risk based approach that evaluates a recreational as well as a residential receptor.

VII. DOE IDENTIFIES TECHNICAL CHALLENGES IN IMPLEMENTING THE 2010 AOC, WARRANTING CAREFUL CONSIDERATION BY DOE OF ITS FEASIBILITY

The Draft EIS acknowledges that the 2010 AOC provides an atypical and unprecedented approach to cleanups:

"Background concentrations and minimum detection limits are lower than what is typically used as a standard for soil cleanup. Most cleanups are based on a risk assessment that follows EPA guidance.

...
Therefore, meeting the 2010 AOC LUT values would require an unprecedented approach and effort."

(Draft EIS, p. 2-24-2-25.)

Since the 2010 AOC was entered into, DOE has had the opportunity to further consider the practical effects of implementing its provisions, and DOE has identified several critical technical issues. As explained in the Draft EIS, the Cleanup to AOC LUT Values approach, which was established without following state or EPA regulations or guidance, creates decision rate errors, and the "acceptable" error rate of five percent, when compounded over 132 constituents, results in a "much greater chance that DOE would be remediating clean soil, not contaminated soil." (Draft EIS, p. 2-26.)

Equally troubling is DOE's conclusion that it would likely not be able to find backfill soil that would meet the AOC LUT values. DOE performed testing of both off-SSFL soil and for comparison, bags of soil purchased from home improvement stores, and found neither met the AOC LUT values.¹⁶

¹⁶ Boeing also evaluated soil samples from seven public park and open space areas located 3 to 25 miles from the SSFL, and 13 of the 30 constituents detected in samples collected in one or more of the parks or open space failed to meet the AOC LUT values. (See Regional Map, Offsite Soil Sampling in Parks and Open Space Areas, Santa Susana Field Laboratory and Detected Chemical Results from Offsite Park and Open Spaces, attached to this letter as Attachment A.) In addition, when comparing California and other national data on soil background results from other studies to the AOC LUT values, 89% of the background levels exceeded the AOC LUT values. (See Published Background Values vs. Area IV AOC Lookup Table Values, Santa Susana Field Laboratory, attached to this letter as Attachment B.) This data further demonstrates that

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146-10 146-10 Please refer to DOE's response to comment 146-7.

146-11 146-11 DOE agrees that there should not be any removal of soil in Area IV without an adequate source of backfill identified. Per the 2010 AOC, "If an onsite or offsite source of backfill soils that achieves all Look-Up Table values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill." DOE will continue to work with the DTSC to identify a source of backfill meeting the 2010 AOC criteria prior to initiation of soil remediation activities.

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(Draft EIS, p. S-24.)

Furthermore, even if soils meeting AOC LUT values could be found, the removal of native soils (including soils that do not present a risk to human health or the environment) would degrade the ecological values of the site because it would not be possible to find acceptable replacement soils that could support the native vegetation. The Draft EIS explains: "If a soil were found that could meet the AOC LUT values, there is also concern that the soil would not be comparable to the physical, chemical, and microbial characteristics of existing soil, making it difficult to re-establish native vegetation in Area IV and the NBZ." (Draft EIS, p. 2-28.)

DOE proposes to engage in a consultation process with DTSC to "determine the best available source of backfill." (Draft EIS, p. 2-28.) Given the need to locate at least 733,000 cubic yards of soil to backfill the massive excavated areas created under an AOC LUT cleanup, the inability to find acceptable replacement soils would have devastating consequences to habitat. The EIS should include a mitigation measure for any AOC LUT cleanup that, prior to the commencement of any remediation activities, DOE and DTSC confirm the availability of sources of replacement soils and confirm that those soils would support replacement of native vegetation. Consistent with standard practices, it would be unacceptable to have excavated areas that would not be properly backfilled due to the lack of soil meeting AOC LUT values.¹⁷

VIII. THE SCOPE OF A CLEANUP TO AOC LUT VALUES COULD BE MORE SEVERE AND ENVIRONMENTAL IMPACTS COULD BE FAR WORSE THAN THOSE IDENTIFIED IN DRAFT EIS

The numerous adverse impacts resulting from the Cleanup to AOC LUT Values alternative are based on certain estimates regarding the scope of activities for that alternative, as well as assumptions regarding the environmental setting and affected environment. For example, the Draft EIS states: "[T]he volume of soil that may not meet the AOC LUT values could range from 1,000,000 cubic yards to 2,500,000 cubic yards." (Summary, p. S-19.) Even though the amount of soil that would need to be cleaned up under the Cleanup to AOC LUT Values alternative could be up to 2,500,000 cubic yards, the Draft EIS uses 1,413,000 as the estimated volume of soil not meeting AOC LUT values, and also deducts 330,000 cubic yards from that estimate for the biological and cultural exemption areas. The 2010 AOC also contemplates the removal of contaminated materials emanating from Area IV or the Northern Buffer Zone, including those transported along the drainages, e.g. leading into and found in Silvernale Pond, but the Draft EIS does not include those soil volumes in its estimates.

Therefore, if the amount of soil not meeting AOC LUT values is on the high side of the range, and if the biological and cultural exemption areas require substantial removal of soil (using risk-based levels

the 2010 AOC cleanup cannot, and should not, be implemented.

¹⁷ Consideration of this factor must include the impact of possible backfill requirements on the NASA and Boeing clean-up efforts at the SSFL.

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146-12 In this Final EIS, DOE has included a sensitivity analysis to assess the potential impacts of a larger volume of soil under the Cleanup to AOC LUT Values Alternative. Since the Draft EIS was prepared, DOE has independently checked the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data and an improved understanding of the soil depth over bedrock across Area IV, DOE is not as uncertain about the upper limit of the soil volume estimate as it was at the time the Draft EIS was prepared. (See Final EIS Section 2.3 and Appendix D, Section D.6.) Consequently, the sensitivity analysis evaluates impacts associated with removing 1,900,000 cubic yards of soil. This volume is based on 1,616,000 cubic yards of soil, which includes volumes of soil associated with areas exempt to protect cultural and biological resources (115,000 cubic yards) and areas proposed for monitored natural attenuation of TPH (620,000 cubic yards), plus an uncertainty factor of 20 percent.

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146-13 The commenter is correct that the current volume estimates do not include DOE cleanup actions in Area III. Silvernale Pond was used primarily as a catch basin for rocket engine quench water, generated from areas other than Area IV. All three of the SSFL responsible parties (Boeing, DOE, and NASA) have contributed to the contamination in the Silvernale Pond. Boeing has informed DOE that it will not allow soil cleanup to AOC LUT values on Boeing property in Area III. Therefore, DOE is assuming that cleanup to risk-based standards will be conducted in agreement with the landowner.

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as proposed¹⁸), the volume of soil to be removed from the SSFL site could be substantially higher, possibly double the amount evaluated in the Draft EIS.

The adverse effects of removing over 2,000,000 cubic yards of soil from Area IV and the Northern Buffer Zone would be even more pronounced than the unacceptable impacts that the Draft EIS found when using a mid-range estimate of soil not meeting AOC LUT values. They would be severe and irreversible. The cleanup activities could take 25 years or more, and the majority of Area IV, the Northern Buffer Zone and adjacent drainages could be excavated, with almost certain permanent devastation to the native vegetation, wildlife habitat and wildlife corridors, along with greater mortality to wildlife. The Draft EIS already acknowledges the potential permanent damage from excavating 130 acres, and with over 2,000,000 cubic yards of soil removal, the remediation footprint could expand another 101 acres (the exemption area acreage with soil that exceeds AOC LUT values), and the possibility for a successful restoration program becomes even more remote. And, of course, this would also mean that large trucks would be on community streets for decades and the greenhouse gas emissions would be over double the current estimates in the Draft EIS.

Boeing is concerned that the Draft EIS may underestimate the adverse effects associated with a Cleanup to AOC LUT Values. **Prior to selecting any alternative, DOE should give full consideration to the possibility that the AOC LUT Values cleanup would be far worse than described in the Draft EIS, which further emphasizes the need to include and consider risk-based alternatives.**

IX. IMPLEMENTATION OF ANY RISK-BASED CLEANUP SHOULD UTILIZE STANDARD EPA RISK ASSESSMENT METHODOLOGIES AND PROTOCOLS

In the Draft EIS, DOE identified two additional action alternatives which incorporate certain risk-based practices, using a residential receptor. ¹⁹ (Draft EIS, pp. 2-31, 2-33). The Revised LUT Values alternative modifies the chemical LUT values based on risk-based screening levels (using point by point cleanup decisions), but the LUT values for radiological constituents would remain the same. (Draft EIS, p. 2-31.) For the Conservation of Natural Resources alternative, the cleanup would be based on a risk assessment for chemicals and a dose analysis (DOE standard of 25 millirem per year) for radionuclides. (Draft EIS, p. 2-33.) Boeing appreciates the technical complexities in developing risk-based alternatives, and **DOE should use standard EPA risk assessment methodologies and protocols for any risk-based cleanup.**

¹⁸ The Draft EIS states that remediation in the proposed exemption areas under the AOC LUT Values, AOC Revised LUT Values, and Conservation of Natural Resources Alternatives would be minimized by use of focused removal actions. Draft EIS p. 2-59. DOE would not take action in the proposed exemption areas unless soil chemical or radionuclide levels pose a risk to human health and the environment. Draft EIS p. 4-38. However, the amount of disturbance in these areas has not yet been determined.

¹⁹ DOE properly excluded the indirect garden pathway from the risk-based analysis because Boeing intends to preserve the property as open space and there will never be any homes or gardens there. (Draft EIS, p. S-18, footnote to Table S-1.)

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146-14 As the commenter notes, the two alternatives to the Cleanup to AOC LUT Values Alternative that DOE has evaluated two alternatives that use two different approaches. The Cleanup to Revised LUT Values Alternative is intended to maintain most of the elements of the Cleanup to AOC LUT Values Alternative. What it changes are the cleanup levels for chemicals, establishing levels based on risk which also makes them more technically viable. DOE's Conservation of Natural Resources Alternative largely follows standard EPA risk -assessment protocols, with exceptions made to accommodate other factors (e.g., DOE's dose-based methodology for cleanup of radioactively contaminated soil, the current version of the Standardized Risk Assessment Methodology developed for SSFL (MWH 2014).

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X. PREFERRED ALTERNATIVE

DOE is required to identify a preferred alternative in its preparation of the final EIS, "unless another law prohibits the expression of such a preference." (40 CFR Section 1502.14(f).) For all of the reasons set forth in this letter, Boeing urges DOE to develop and select as its preferred alternative, an alternative that achieves the purpose and need to protect human health and the environment, uses standard EPA risk assessment methodologies and protocols, minimizes impacts to the local community, fully takes into consideration how best to protect and preserve the unique biological and cultural resources at the site, and results in the fewest environmental impacts.

146-15 146-15 Please refer to DOE's response to comment 146-1.

XI. BOEING'S ADDITIONAL COMMENTS ON DRAFT EIS BY RESOURCE AREA

A. Biological Resources

1. DOE Considers Direct and Indirect Impacts to Threatened, Endangered and Rare Species Protected under Federal and State Law, and Properly Identified Biological Exemption Areas to be Protected for All Alternatives

In evaluating potential impacts to biological resources, DOE appropriately considers potential impacts to vegetation and wildlife habitats, aquatic and wetland habitats, and rare, threatened and endangered species under State and federal law, primarily in Area IV and the Northern Buffer Zone, but extending beyond those boundaries in certain instances. (Draft EIS, p. 3-46.) This analysis allowed DOE to identify biological areas that would be exempt from the 2010 AOC's soil cleanup requirements, and that would be protected under any of the soil remediation alternatives. DOE is in the process of preparing a site-wide Biological Assessment (with Boeing's input), which will allow DOE, Boeing and NASA to coordinate its efforts to protect these important resources across the entire SSFL site. Importantly, separate and apart from the 2010 AOC, NEPA (and CEQA) require the evaluation of potential impacts to biological resources resulting from the proposed action or project. Thus, whether these biological areas are known as "exemption" areas or merely areas that contain sensitive biological resources, any impacts to these areas must be fully evaluated under NEPA. Boeing supports DOE's efforts to capture the breadth of biological resources in the Draft EIS, to assess the potential impacts to those resources, and to develop a framework for moving forward in the process with regulatory agencies and stakeholders.

146-16 146-16 Please refer to DOE's response to comment 146-3.

2. DOE Should Consider Potentially Adverse Impacts to 2010 AOC Exemption Areas and Areas Outside Area IV and The Northern Buffer Zone

The 220 acres that comprise the 2010 AOC exemption areas have been eliminated from consideration in the Draft EIS. The preliminary estimate of soil in these exemptions areas is 330,000 cubic yards, based on a footprint of up to 101 acres, which is the acreage which may exceed AOC LUT values.

146-17 146-17 Thank you for your comment. The figures specifically show DOE's area of responsibility. The figures reflect the most current biological data available for Area IV and the NBZ.

(Draft EIS, pp. 2-18, 4-57.) The Draft EIS acknowledges that an "unquantified" amount of acreage within the exemption areas would be disturbed:

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"To summarize, this alternative would result in removal of vegetation and wildlife habitat over about 130 acres outside of the proposed exemption areas and *an unquantified additional acreage within the proposed exemption areas*, causing mortality and disturbance of wildlife within and adjacent to the affected area."

(Draft EIS, p. 4-59, emphasis added.) The Draft EIS indicates that the total area to be disturbed will be determined in consultation with various federal and State agencies, and the potential impacts to biological resources associated with this additional disturbance should be described and disclosed in conjunction with this process.

The Draft EIS states that the "ROI [Region of Influence] for biological resources encompasses areas that could be directly or indirectly impacted by the proposed activities, including Area IV and the NBZ." (Draft EIS, p. 3-46.) In describing drainages, the Draft EIS states:

"A total of 13,100 linear feet covering 0.62 acres of riverine water of the U.S. were mapped in Area IV and the NBZ (see Appendix J). Some of these drainages proceed down gradient from Area IV into Area III, then Area II. Stormwater runoff from the upland developed area is currently diverted at the stormwater treatment outfalls and routed via aboveground HDPE pipelines to Silvernale Pond in Area III for treatment before being released into the Bell Canyon watershed."

(Draft EIS, p. 3-62.) While the Draft EIS intends to evaluate biological resources outside Area IV and the Northern Buffer Zone, some diagrams in the Draft EIS show incomplete depictions of these resources and thus, it is not clear that they were fully considered. For example, Figure 3-21 depicts Silvernale Pond, but the drainages are shown as terminating at the boundary between Area IV and Area III, and does not show the linkage to Silvernale. Similarly, the Draft EIS states that "Figure 3-21 shows wetlands, vernal pools, jurisdictional waters, ponds, and NPDES outfalls in Area IV and the NBZ, or in other SSFL areas but important to the proposed activities." (Draft EIS, p. 3-60.) But, Figure 3-21 depicts only some of these features in Areas II and III, and the omission of the other features, e.g., jurisdictional waters, implies they do not exist.

In addition, based on biological assessments of the SSFL as a whole, including Area IV and the Northern Buffer Zone, other wildlife species should also be considered, including 138 bird species (not just 64 species noted in the Draft EIS) including the great horned owl, as well as the legless lizard and other California species of special concern, along with a flock of year-round resident western meadowlarks known to visit the Area IV grasslands. The Draft EIS's analysis of Santa Susana tarplant is based on 850 individual plants in Area IV, but the SSFL site has more than 12,000 individual plants which could represent the highest occurrence of the species anywhere. Limiting the proposed action's impacts to 850 plants could understate the impacts in the larger context of this tarplant population.

The biodiversity of the SSFL site is incredibly rich and DOE should ensure that potentially adverse impacts to all known biological resources are considered in the EIS.

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3. DOE Should More Fully Evaluate the Impacts of the Cleanup to AOC LUT Values on the Larger Wildlife Corridor

Section 3.1.1.1 of the DEIS recognizes that:

“SSFL sits within a rare and vital wildlife corridor connecting the Sierra Madre Ranges of the Los Padres National Forest to the Santa Monica Mountains and the Pacific Ocean. Termed the Santa Monica - Sierra Madre Connection and comprising approximately 125,000 acres, the corridor consists of sandstone cliffs, oak woodlands, and scrub and meadows, with valley and mountain vistas. Several formally designated open space areas are located within close proximity to SSFL and are a part of this unique corridor.”

(Draft EIS, p. 3-3.)

This Section recognizes that the site is being considered as part of the proposed Rim of the Valley Act (H.R. 5467), in order to be added to the Santa Monica Mountains National Recreation Area, because of the property’s ecological values. The Draft EIS should also recognize a parallel effort by Ventura County to enhance the natural wildlife corridor that currently exists. The Board considered the following background information in evaluating a Wildlife Corridor Overlay Zone that would include the SSFL:

“The ability for wildlife to cross between large natural land masses is critical to their survival. Some species, including mountain lions in the Santa Monica Mountains, are essentially on an island of nature surrounded by freeways, roads and urban development that limit their ability to roam. This constriction of movement threatens wildlife by reducing genetic diversity and increasing incidents of roadkill. Establishing safe passage along existing wildlife corridors can make the difference as to whether species continue or decline in our region.”²⁰

²⁰ “Background Information: Wildlife Corridor Overlay Zone, Board of Supervisors Agenda, January 24, 2017.” Ventura County Board of Supervisors, Supervisor Linda Parks.

146-18

146-18 Additional information about mountain lion sightings at SSFL was added to this Final EIS, Chapter 3, Section 3.5.5. Updates have been made to the Ventura County Locally Important species which are addressed in Chapter 3, Table 3-7, of this Final EIS.

Additional information about the Rim of the Valley Corridor Special Resources Study was added to this Final EIS, Chapter 3, Section 3.1.1. DOE believes that the actions, including the implementation of exemption areas, and precautions (see Chapter 6 for minimization and mitigation actions) being taken as part of the site remediation of Area IV and the NBZ are consistent with the purposes of this initiative.

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Mountain lions are indeed active at the SSFL, as shown in this recent nighttime photograph of an adult mountain lion and two cubs.



Mountain Lion and Two Cubs at SSFL Watering Guzzler (January 31, 2017)

The Draft EIS analyzes some of the Environmental Consequences of the Cleanup to AOC LUT Alternative in Chapter 4 of the EIS. The summary from the Draft EIS, previously quoted above in Section VI, highlights the severity and permanency of the consequences to biological resources:

To summarize, this alternative would result in removal of vegetation and wildlife habitat over about 130 acres outside of the proposed exemption areas and an unquantified additional acreage within the proposed exemption areas, causing mortality and disturbance of wildlife within and adjacent to the affected area. The profound soil disturbance caused by remediation will require special measures to accomplish restoration of a self-sustaining native vegetation cover and sources of suitable clean soil for backfill where soil has been removed have not been identified. If backfill is substantially different than that originally present, it may not support vegetation similar to that present before development of Area IV. With implementation of habitat restoration and revegetation measures, as well as

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measures to reduce or avoid impacts on wildlife as described in Chapter 6, impacts would be reduced, but would remain substantial given the degree of habitat loss and the length of time required to restore vegetation, habitat function, and wildlife population.

(Draft EIS, p. 4-39.)

The impacts detailed in the Draft EIS are unquestionably substantial. As the Draft EIS notes, permanent uprooting of native plants and soil will severely damage plant communities and disrupt animal behaviors, including essential behaviors such as feeding and, consequently, breeding. Such a disruption is part of the classic definition of a "take" under the Endangered Species Act (ESA). The status of the mountain lions, bobcats, bears, deer and other large mammals under the ESA is not the issue here, as the impact to these animals is a significant (but avoidable) impact that needs to be considered in the NEPA process.

Boeing urges DOE to devote more study and analysis to the long term impacts that the Cleanup to AOC LUT Values alternative would have on biological resources. Moreover, in considering the impact of the Cleanup to AOC LUT Values alternative, DOE should consider the purposes of both the Rim of the Valley initiative and the County's Wildlife Corridor Overlay Zone, and the negative impacts of this alternative on those Federal and local land use planning efforts.

4. The EIS Should Acknowledge That the Impact of Wildlife Mortality on Roads Would Be Reduced with Fewer Truck Shipments

One often over-looked issue in evaluating impacts to biological resources is the potential for killing of wildlife on roads. The Draft EIS identifies this issue in the Cumulative Impact Analysis: "Additionally, the truck trips would increase the potential for adverse effects from animal-vehicle collisions on wildlife." (Draft EIS, p. 5-15.) However, this potential impact should also be factored in as a part of the proposed action, as the Cleanup to AOC LUT Values alternative will require over 110,000 truck shipments, likely resulting in substantial road kills of native animals, particularly special-status reptiles. (Draft EIS, p. 4-103, Table 4-48.) While some roads identified for truck transportation are heavily travelled, Woolsey Canyon, the main access road to the SSFL is located in a sparsely developed area; with 10 or more years of heavy truck traffic, the impacts to native animals traversing the area could be substantial and must be carefully analyzed and taken into account when selecting a preferred alternative. Fewer truck trips under risk-based alternatives would reduce this impact dramatically.

B. Land Resources

The Land Resources section of the Draft EIS includes an analysis of potential impacts to Land Use, Recreation, Infrastructure, and Aesthetics and Visual Quality. The Draft EIS concludes that the impacts to Land Use for all soil action alternatives are consistent with Boeing's intent to preserve the property as undeveloped open space and that the impacts to Aesthetics and Visual Quality would be beneficial.

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The impacts on wildlife due to vehicle collisions on roads have been incorporated under each alternative in Chapter 4, Section 4.5, of this Final EIS.

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Please refer to DOE's responses to comments 146-8 and 146-9. Whereas any remediation activities would result in disruption of the current natural setting and the more extensive the remediation, the more disruption, the land use would remain open space under any of the soil action alternatives. However, DOE revised this Final EIS to acknowledge that greater disruption has the potential for extended time frames for impacts to the Aesthetic and Visual Quality of Area IV and the NBZ.

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With respect to Land Use, the SSFL property is designated as Open Space in Ventura County's General Plan. In the General Plan, Open Space is defined to include unimproved land which is designated on a local, regional or State open-space plan as: "Open space for the preservation of natural resources . . . Open space for outdoor recreation . . ." (Ventura County General Plan – Goals, Policies and Programs (10-20-15 edition) ("General Plan"), pp. 56-57.) The General Plan goals for Open Space land include:

- Preserve for the benefit of all the County's residents the continued wise use of the County's renewable and nonrenewable resources by limiting the encroachment into such areas of uses which would unduly and prematurely hamper or preclude the use or appreciation of such resources.
- Retain open space lands in a relatively undeveloped state so as to preserve the maximum number of future land use options.
- Retain open space lands for outdoor recreational activities, parks, trails and for scenic lands.

(General Plan, p. 58.) The policies to implement these Open Space goals include:

- Open Space should include areas of land or water which are set aside for the preservation of natural resources, including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays, and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and important watershed lands.
- Open Space should also include areas within which recreational activities can be pursued, including, but not limited to, areas of outstanding scenic, historic, and cultural value; areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams; and areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

(General Plan, pp. 59-60.) As set forth in Ventura County's General Plan, the Open Space designation includes the preservation of undeveloped property for the benefit of natural resources and for recreational activities. Given the substantial and potentially permanent impacts to natural resources from the Cleanup to AOC LUT Values alternative, DOE should consider whether the AOC LUT approach is consistent with this Open Space designation and Boeing's intent to preserve the land as undeveloped open space.

Under the Building No Action alternative, the Draft EIS's analysis of Land Use should note that this alternative is not consistent with Boeing's intent to preserve the property as undeveloped open space.

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146-21 The No Action Alternative is presented as the baseline or existing conditions at the site. Section 4.1.1.1 of this Final EIS was changed to address this comment.

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The Land Resources section of the Draft EIS also evaluates Recreation primarily from the perspective of whether transportation impacts from the remediation activities would impede access to existing recreation areas. The Analysis Considerations listed in Table 4-3 for Recreation include: "Impediment on future development of recreation facilities." (Draft EIS, p. 4-6.) While Boeing appreciates that Area IV and the Northern Buffer Zone are not currently open to the public for recreational purposes, one of Boeing's primary objectives for the SSFL property is to ensure that it is protected for recreational purposes. **Given that Cleanup to AOC LUT Values alternative is estimated to take at least 12 years to complete, the EIS should acknowledge that this lengthy delay constitutes an impediment to the future development of recreational facilities at the SSFL.**

With respect to Aesthetics and Visual Quality, the Draft EIS characterizes the site as "urban industrial" or "those areas consisting of or bordered by urban and industrial land use within the foreground distance zone." (Draft EIS, Appendix B, p. B-4.) Potential impacts to views are quantified based on a sensitivity level analysis and a visual resource assessment. (Draft EIS, Appendix B, p. B-3.) Based on the fact that the property is not accessible or visible to the public, the Draft EIS concludes that the public sensitivity level is "no sensitivity." (Draft EIS, p. 4-7.) "No Sensitivity" is defined as follows: "The views are not public, or there are no indications of public concern over or interest in scenic/visual resources impacts on the affected area." (Draft EIS, Appendix B, p. B-6.)

In evaluating the Cleanup to AOC LUT Values alternative, the Draft EIS recognizes that there would be impacts during the 10 years of soil removal, but "long term improvements to aesthetics and visual quality from returning Area IV to a stabilized, revegetated state." (Draft EIS, p. 4-9.) The Draft EIS compares the soil cleanup and use of heavy equipment, which has an "industrial appearance," to the "urban industrial" visual character of the site. (Draft EIS, p. 4-12.) The Draft EIS concludes that the impacts from the three viewing points would be "beneficial." (Draft EIS, Table 4-6, p. 4-12.) The Draft EIS does not provide any "before and after" viewing point simulations (in contrast to the Building Removal alternative, where "before and after" simulations were provided.)

The photographs provided at the beginning of this letter show Area IV and the surrounding vicinity. An AOC LUT cleanup would destroy, perhaps permanently, the natural habitat and beauty of the site.

The Draft EIS provides the following rationale for concluding that the impact of the Cleanup to AOC LUT Values would be beneficial:

"Although soil cleanup would alter the existing aesthetic and visual quality of Area IV by disturbing native vegetation, stabilization and revegetation of the affected areas would introduce new, long-term surface texture and color in areas that were previously barren. New vegetation alone would not likely be sufficiently beneficial to improve the visual modification class rating of the viewing point and associated areas – that is, the view would consist of open space crossed by roads before and after remediation. However, new vegetation would still benefit the aesthetics and visual quality of the area and would not cause an adverse effect."

(Draft EIS, p. 4-12.)

146-22

146-22 The text of this Final EIS was revised to indicate that the availability of Boeing's SSFL property for the purposes intended in the land use covenant are directly affected by the duration of remediation activities.

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146-23 Under all soil remediation alternatives, including the Cleanup to AOC LUT Values Alternative, the amount of land disturbed at a given time would be variable. Remediation would be done in stages, with certain areas being excavated, others backfilled and showing signs of recovery from revegetation, and still others being undisturbed. It is a presumption in the EIS that revegetation will be successful. As stated in Table 6-1, DOE would prepare a site-specific Revegetation and Habitat Restoration Plan that would address all revegetation efforts associated with soil disturbances. Among the requirements of this plan would be "Seed mixes will include only species native to the site and will be collected from onsite source." DOE notes that because the area would be remediated in stages, it is not correct to picture the entire 150 acres disturbed and 881,000 cubic yards removed all at the same time. While DOE agrees that disturbance of 150 acres across the site would be disruptive to the existing visual and natural setting, DOE is confident that a successful backfill, contouring, and revegetation effort could restore the site to a natural-looking state. With respect to protecting cultural values of SSFL, DOE will comply with NHPA and take measures in accordance with the Section 106 National Historic Preservation Act (NHPA)

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Given the “profound soil disturbance” anticipated with the Cleanup to AOC LUT Values, along with the uncertainty for successful habitat restoration, it is difficult to imagine how the impacts to Aesthetics and Visual Quality could be beneficial. The viewing points of the existing site, while they certainly include industrial buildings, show that Area IV is substantially green space, and not merely “open space crossed by roads.” (Draft EIS, pp. 3-13 – 3-14, Figures 3-6, 3-7 and 3-8.) While revegetation may marginally improve a ravaged landscape, the visual quality of the site would be devastated by 130 acres of disturbance (not including the biological and cultural exemption areas) that most likely would not be revegetated with native plants. Thus, the post-remediation visual quality could never be the same as the visual quality of the site currently, with its unique environmental beauty, despite the smattering of existing industrial buildings or roads. Viewing point simulations of the 130 acres of disturbance, along with the removal of at least 933,000 cubic yards of soil, could be prepared to demonstrate the undoubtedly severe effects of the Cleanup to AOC LUT Values alternative.

Finally, the characterization of the site as “No Sensitivity” seems to be inconsistent with future use of the property as open space, inconsistent with the Native Americans’ belief that the SSFL is a sacred site and a traditional cultural property, inconsistent with multitude of stakeholders interested in preserving the site’s unique natural resources, and inconsistent with Boeing’s own interest in preserving and enhancing the visual quality of its property.

C. Surface Water

The Draft EIS concludes that the existing onsite NPDES stormwater control and outfall monitoring system, in combination with mitigation measures and other BMPs, will ensure that the Cleanup to AOC LUT Values alternative will not result in adverse impacts to surface water quality or to stormwater runoff quantity and velocity. (Draft EIS, p. 4-40.) Given the enormous amount of soil to be removed over 130 acres, the likelihood of increased runoff and NPDES permit exceedences would be high, despite the implementation of BMPs and proposed mitigation measures. Documented use of BMPs, including post-fire vegetation reports, indicate that these BMPs (e.g., straw bales, silt fencing) may not be effective in meeting inordinately stringent discharge standards.

Further, Mitigation Measure SW-1 prohibits excavation of soils to bedrock and backfill activities for six months of the year (December to May), which would extend considerably the 12-year cleanup schedule. (Draft EIS, p. 6-17.) The impacts of this extended schedule should be evaluated in the EIS. Also, this prohibition could potentially interfere with revegetation efforts as the prohibition covers much of the rainy season for this region.

Moreover, Mitigation Measure SW-2, contemplates the installation of additional stormwater retention structures (such as catch basins or retention basins). DOE should include in its analysis the additional time required to secure any grading permits and to satisfy other regulatory requirements. **In addition, DOE should consider what other mitigation measures it may need to implement to ensure that no adverse impacts to surface water quality or to stormwater runoff quantity and velocity would occur.**

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Programmatic Agreement (an agreement being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC) to protect cultural resources, regardless of the alternative selected. The entire effort would be undertaken in consultation with biologists and Native Americans to address negative impacts to the extent practical and in accordance with the NHPA Section 106 Programmatic Agreement and the Biological Opinion.

146-24 DOE has added information to this Final EIS in Chapter 4, Section 4.3.1 regarding the Stormwater Pollution Prevention Plan (SWPPP) that will be developed for soil remediation actions. The SWPPP will incorporate all appropriate runoff control measures recommended by the Stormwater Expert Panel. In addition, as was noted in Chapter 4, Section 4.3.1, the excavation actions included in the alternatives that would remove soil to the underlying bedrock and backfill to initiate revegetation in drainage areas leading offsite would be limited by Mitigation Measure SW-1, to only occur in periods outside of the December through May. stormwater season to avoid any increases in runoff volume and velocity potentially created by increases in impervious surfaces on site with the exposure of areas of currently covered bedrock. As required by 10 CFR 1021.331, following completion of the Record(s) of Decision (ROD[s]) for this Final EIS, DOE will prepare a Mitigation Action Plan that addresses mitigation commitments expressed in the ROD(s), including those that are necessary to prevent movement of contaminants during soil remediation. The Mitigation Action Plan will explain how the corresponding mitigation measures, designed to mitigate adverse environmental impacts associated with the course of action directed by the ROD(s), will be planned and implemented. This will include the process necessary to implement any additional stormwater control mechanisms potentially required under Mitigation Measure SW-2 in the event that the best management practices required under the SWPPP and the construction scheduling requirements in Mitigation Measure SW-1 would not limit runoff rates and volumes to the design capacities of the existing NPDES stormwater control system.

146-25 Based on annual soil volume limits and funding limits, DOE would most likely schedule soil remediation outside of the areas limited by Mitigation Measure SW-1: Excavation of soil to bedrock and backfill in drainage areas leading offsite during the period December to May would not be performed. As a result, implementation of Mitigation Measure SW-1 is unlikely to increase the total project schedule. Chapter 4, Section 4.3.1 of this Final EIS was revised to clarify that, only soil excavation and backfilling activities in drainage areas leading offsite would be restricted during the rainy season and that

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The Draft EIS assumes that the NPDES monitoring system will remain in place during and after soil remediation, which under the Cleanup to AOC LUT Values alternative, could be 10 years after soil remediation activities have started. As acknowledged in the Draft EIS, Boeing's remediation activities are not expected to take that long, and ongoing responsibility for the NPDES system will need to be considered. Also, the Draft EIS acknowledges that in the long-term, the need for monitoring surface water runoff from the site would be reduced. (Draft EIS, p. 4-40.) Thus, at some point, the BMPs at Outfalls 3, 4, 5, 6 and 7 should be removed, and the EIS should consider including an evaluation of removing these BMPs, including any contaminated materials located at these outfalls.

D. Cultural Resources

The Draft EIS recognizes the significant impacts of the Cleanup to AOC LUT Values alternative on traditional cultural resources, including impacts to topography and setting resulting from 10 years of soil removal across 130 acres. (Draft EIS, p. 4-167 – 4-168.) However, the Draft EIS concludes that no adverse impacts to archaeological cultural resources would occur because 1) DOE identified all known archaeological resources based on an extended phase 1 testing program; and 2) these archaeological resources are located in the 2010 AOC exemption areas where no AOC LUT excavation would occur. (Draft EIS, p. 4-167.) The Draft EIS does not, but should, consider the potential impacts to archaeological resources such as rock shelters from the dust generated by adjacent remediation activities and vibrations from heavy equipment used in such activities. The Draft EIS also indicates that the 2010 AOC exemption areas would be remediated using a risk assessment approach and thus, some work in these areas will be performed, but it is unknown whether that work will impact archeological resources. The amount of disturbance to the 2010 AOC exemption areas has not yet been determined and will be based on the results of consultations with DTSC, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, State Historic Preservation Officer (SHPO) and the SSFL Sacred Sites Council. (Draft EIS, pp. 4-57 – 4-58.) The 2010 AOC biological and cultural exemption areas total 220 acres, of which 101 acres contain chemical or radioactive materials exceeding AOC LUT values, and thus, up to an additional 101 acres containing important archaeological resources could be disturbed depending on how the 2010 AOC exemption areas are interpreted by regulatory authorities.

While the Draft EIS evaluates the potential impacts to traditional cultural properties, it does not evaluate whether any of Area IV or larger portions of the SSFL site are eligible for designation as a historic district under the National Historic Preservation Act. "Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior." (36 CFR Section 800.16(1)(1). A "historic conservation district" is defined in the NHPA as follows:

§ 300305. In this division, the term "historic conservation district" means an area that contains—
(1) historic property; (2) buildings having similar or related architectural characteristics; (3) cultural cohesiveness; or (4) any combination of features described in paragraphs (1) to (3).

146-26

revegetation efforts would not be restricted to these dry months. DOE would schedule these actions to take advantage of the rainy season to establish vegetation in the period of December through May.

146-26 During soil remediation, DOE will implement efforts to protect and maintain storm water controls, including those already constructed by Boeing. However, because Boeing is the permittee with the State of California for the existing structures, DOE believes that the completion of Boeing's soil remediation activities would not eliminate the need to maintain storm water controls under its existing stormwater permit and Boeing, as the property owner, will have to continue to maintain these controls.

146-27

146-27 Because air quality impact analysis and noise and vibration impact analysis presented in Chapter 4, Sections 4.6 and 4.7, respectively, show that there would be no substantial impacts overall from cleanup activities, their impacts on archaeological sites was not discussed in Chapter 4, Section 4.11. In some cases, a no impact finding is based on there being no impact at all, and in other instances it is based on implementation of best management practices and mitigations, as described in Chapter 6, Sections 6.1 and 6.2. The air quality analysis concludes that although activities at SSFL would generate fugitive dust, it is expected that implementation of DOE's protective measures during cleanup activities would result in there not being substantial air quality impacts at any location. For vibrations, vibration from cleanup activities outside of the cultural exclusion areas, including machinery operation, is not projected to be great enough to cause impacts to archaeological resources. Cultural resources impact analyses were revised to clarify that DOE is aware of the potential for previously unidentified archaeological sites in areas where cleanup activities would occur, including in the vicinity of known sites, and that DOE has procedures in place if such cultural resources are encountered. Some cleanup may occur in exemption areas if necessary to protect human health and the environment. These circumstances will be outlined in the detailed Soil Remedial Action Implementation Plan. To address unevaluated sites (inadvertent discoveries), DOE has committed to protecting both known and unknown cultural resources (as broadly defined for the purposes of this EIS in Chapter 3, Section 3.11.1), including the Traditional Cultural Property in Area IV and the NBZ, and is preparing an NHPA Section 106 Programmatic Agreement. This agreement, being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC, will establish standard operating procedures for DOE to address cultural resource issues, including impact mitigation measures. The NHPA Section 106 Programmatic Agreement will establish procedures for making eligibility

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Under Section 106 and its implementing regulations, federal agencies are required to consider whether its actions will have any adverse effects to "historic properties." (36 CFR Section 800.5.) **DOE should consider whether any of Area IV or larger portions of the SSFL might be eligible as a historic district, and consider the potential adverse impacts of the Cleanup to AOC LUT Values on that district.**

E. Air Quality

The EIS acknowledges that estimated emissions from the Cleanup to AOC LUT Values alternative are two to six times higher than the estimated emissions for the Cleanup to Revised LUT Values alternative, and three to eight times higher than the Conservation of Natural Resources alternative. (Draft EIS, p. 4-78, Table 4-31.) These total emissions, however, are not further explored or considered, and instead, the EIS focuses only on peak annual emissions and daily emissions: "[T]he main focus of the analysis in this subsection is on comparison of emissions against annual emission thresholds and daily ambient air quality standards rather than total emissions." (Draft EIS, p. 4-80, fn. 12.) While peak annual and daily emissions are important factors to be considered, **the EIS should also further evaluate the impacts of 10 to 12 years of air emissions generated by the Cleanup to AOC LUT Values alternative, particularly nitrogen oxides (NOx) and Particulate Matter (PM 2.5 and PM10.**

Moreover, the EIS reports a peculiar and incongruous conclusion for peak annual NOx emissions in South Coast Air Basin, stating that peak annual NOx emissions for the Cleanup to AOC LUT Values alternative is *less than* the NOx emissions for the Cleanup to Revised LUT Values or the Conservation of Natural Resources alternative (5.7 tons compared to 8.7 tons, for the nearby disposal site). (Draft EIS, p. 4-84.) A similar conclusion is reported for the peak daily NOx emissions where the "largest daily emissions" are reported for the Cleanup to Revised LUT Values and Conservation of Natural Resources alternatives (nearby disposal site). (Draft EIS, p. 4-85.) For domains outside Ventura County and South Coast Air Basin, the Cleanup to AOC LUT Values alternative has a smaller amount of peak annual NOx emissions than the other two alternatives for both disposal site scenarios (2.7 tons compared to 12 tons for the nearby disposal site, and 14 tons compared to 51 tons for the distant disposal site). The EIS does not provide, either in the text or in an appendix, an explanation for this disparity.

The thresholds used in the EIS for potential impacts to air quality are based on the EPA's Prevention of Significant Deterioration threshold. (Draft EIS, p. 4-75.) However, given the goal of integrating the requirements of both NEPA and CEQA into the environmental analysis, DOE should consider utilizing the thresholds set forth in the CEQA Guidelines (Appendix G), and the air quality thresholds mandated by Ventura County Air Pollution Control District and the South Coast Air Quality Management District. For example, the NOx threshold in Ventura County is 25 pounds per day, and the peak daily emissions for NOx are reported to be 44-46 pounds per day, in excess of the threshold.²¹ The thresholds for air quality set forth in Appendix G of the CEQA Guidelines include the following question: "Would the project . . . [e]xpose sensitive receptors to substantial pollutant concentrations?"

²¹ Ventura County Air Quality Assessment Guidelines (October 2003), p. 3-2.

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determinations on unevaluated sites, as needed, and inadvertent discoveries, along with procedures to assess effects and resolve adverse effects if they are determined eligible for the NRHP.

146-28 Chapter 3, Section 3.11.2.3.4 discusses the status of SSFL as a historic district based primarily on the archaeological and traditional resources there. However, because the existing environment does not currently include a defined historic district, Chapter 4, Section 4.11 did not address impacts to one. DOE, NASA, and Boeing continue to work together to determine if the cultural resources at SSFL embody the characteristics necessary to constitute a NRHP-eligible historic district, in addition to the existing designation as a sacred site. The boundaries and components of a potential district would cross jurisdictional lines at SSFL, but might not include the entire SSFL. For this reason, it was not specifically described in the Draft EIS. However, the status of the potential historic district is updated in Section 3.11.2.3.4 of this Final EIS.

146-29 Comment noted. The presentation of the magnitudes and durations of total emissions generated by each soil remediation alternative in Chapter 4, Section 4.6.1 of this EIS provides the long-term context and intensity of each alternative. In response to this comment, this Final EIS includes text in Chapter 4, Section 4.6.4 that explains how long the annual and daily emissions would occur from each soil remediation alternative.

146-30 The conclusions cited in the comment are correct. After summarizing the emission estimates for the South Coast Air Basin, the Draft EIS stated in the first sentence of page 4-85 "The variation in emissions between the near and distant disposal site scenarios reflects, for each combination of action alternatives, the transport of different quantities of different types of waste to different disposal sites, and the lengths of the truck routes within or through the South Coast Air Basin may differ depending on the disposal site scenario. This explanation also would apply to emissions generated within the domain "Outside of Ventura County and the South Coast Air Basin."

More specifically, the Draft EIS proposed that during the peak year of activities, all three soil remediation alternatives excavated and transported the same volume of soil. The Cleanup to Revised LUT Values and Conservation of Natural Resources Alternatives proposed excavation of about 5 times the volume of soils in categories 4-6 versus the AOC LUT Values Alternative during the peak year. Seventy-nine percent of the soils excavated under the Cleanup to AOC LUT Values Alternative would have been categories 1-2 soils. Within the South Coast Air Basin, the distances travelled by haul trucks to nearby disposal facilities for these soils are longer compared to soils in categories 1-2. Likewise, within the domain outside of Ventura County and the South

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While the EIS acknowledged the importance of sensitive receptors and the impact of air emissions in Section 3.6.1.2.4 (Affected Environment), the EIS does not appear to conduct an analysis of potential impacts to sensitive receptors, e.g., localized emissions, and such an analysis should be performed.

XII. CUMULATIVE IMPACTS

The Cumulative Impacts Section of the Draft EIS also recognizes that, in connection with other reasonably foreseeable past, present, and future actions in the "region of influence" (ROI), implementation of the Cleanup to AOC LUT Values alternative would cause long-term loss of endangered, threatened, rare, and otherwise sensitive plant and animal species and loss of habitat:

"The major potential cumulative impacts associated with reasonably foreseeable actions in the ROI in combination with DOE's proposed actions at Area IV and the NBZ include the following:

- Vegetation clearing and soil removal could cause long-term loss of individuals and habitat of federally or state-listed endangered, threatened, rare, and otherwise sensitive plant and animal species from:
 - loss of habitat and mortality of individuals of species unable to escape the construction zone;
 - temporary loss of habitat due to animals avoiding activities, noise, and dust generated by humans and equipment during remediation (behavioral avoidance);
 - wildlife displaced from their habitat by construction activity may become more susceptible to predation and intra-species competition and less able to obtain adequate food and cover;
 - diminished reproduction of nearby wildlife (such as nest failures) due to the activities, noise, and dust generated by humans and equipment during remediation; and/or
 - possible effects on regional wildlife movements (wildlife corridors) as a result of behavioral avoidance of the activity and cumulative loss of plant cover.
- Lack of sources of soil matching onsite soil types and meeting LUT values in sufficient quantities to be used as backfill to replace removed soil may result in substitution of soils that may not support native vegetation, including rare plant species. Additionally, depending on the source and characteristics of the soil, imported soils used as backfill may lead to infestations by invasive species, with consequent impacts on nearby plants and animals.
- Loss or degradation of habitat could be caused by the spread of invasive species or soil pathogens promoted by extensive disturbed areas (creating open habitat for invasive species establishment) and the spreading of propagules (seed, plant parts capable of rooting) or pathogenic soil micro-organisms (e.g., oak root fungus) transported in soil or mud by movement of humans, vehicles, and equipment from site to site.
- Loss or degradation of adjacent habitat could be caused by erosion, sedimentation, turbidity, or dust deposition as a result of excavation and earthmoving activities.

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Coast Air Basin, the distances travelled by haul trucks to nearby/distant disposal facilities for soils in categories 4-6 are both substantially longer compared to soils in categories 1-2. Therefore, the Cleanup to Revised LUT Values and Conservation of Natural Resources Alternatives would have produced greater peak annual and daily miles travelled by haul trucks and corresponding higher air emissions compared to the Cleanup to AOC LUT Values Alternative within the (1) South Coast Air Basin under the nearby disposal facilities scenario and (2) domain Outside of Ventura County and the South Coast Air Basin under the nearby/distant disposal facilities scenario.

Due to the revisions to the descriptions of soil remediation alternatives in the Final EIS, both the Cleanup to AOC LUT Values and Revised Cleanup to LUT Values Alternatives would remove the same amounts of soils in a peak year and therefore would generate equal amounts of emissions during this period. Chapter 4, Section 4.6.1 of this Final EIS is revised to explain how annual emissions generated by the soil remediation alternatives are dependent on the types of remediated soils and the associated disposal locations for these soils. In the Final SSFL Area IV EIS air emissions calculation document (Leidos 2018b), Table 1.A-12 (Total On-Road Vehicle Activity Data for Soil Remediation Cleanup to AOC LUT Values - SSFL Area IV EIS) also presents the round trip distances travelled by haul trucks between the SSFL and proposed disposal facilities for each soil category and analysis domain.

146-31 This EIS uses the following thresholds to evaluate air quality impacts from proposed DOE cleanup activities within each analysis domain: (1) an EPA Prevention of Significant Deterioration (PSD) threshold for areas that attain a national ambient air quality standard (NAAQS) and (2) a general conformity *de minimis* threshold for areas that do not attain a NAAQS. Therefore, this approach is sensitive to the existing air quality conditions within each domain. This EIS also qualitatively determines whether emissions from proposed activities would produce localized impacts that would contribute to an exceedance of an ambient air quality standard DOE considers these thresholds to be appropriate for purposes of evaluating air quality impacts from the proposed SSFL project alternatives to all analysis domains, as they are based on approved regulations. Regarding sensitive receptors, this Final EIS includes analyses of the potential for emissions from the proposed cleanup activities to impact sensitive receptors within each analysis domain; sensitive receptors would not be exposed to substantial pollutant concentrations (see Final EIS Chapter 4; Sections, 4.6.4.1, 4.6.4.2, and 4.6.4.3).

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- Beneficial cumulative impacts to biological resources could result from returning land to a more natural state after building removal and removal of radionuclides and other hazardous constituents during soil and groundwater cleanup.

At SSFL, the combined soil excavation activities of DOE, NASA, and Boeing would cause profound disturbance (removal of vegetation and soils) over a minimum of 226 acres and a maximum of 405 acres (see Table 5-2), compared to a minimum of 32 acres and a maximum of 130 acres for DOE alone. Proposed 2010 AOC (DTSC 2010a) exemption areas would protect most sensitive plant species and unique habitats, including designated critical habitat, on Area IV and the NBZ. On NASA and Boeing properties, acreages that would be impacted by remediation include some localized and unique habitats, as well as formerly widespread and common habitats that have been greatly reduced as a result of urban and suburban expansion in the surrounding valleys, foothills, and canyons. These losses would increase the importance of remaining habitat and open space on SSFL and its vicinity for wildlife and plants. The effects of vegetation and soil removal could result in long-term impacts due to the time and intense effort needed to restore the habitat."

(Draft EIS, p. 5-14, emphasis added.)

The Draft EIS should consider the magnitude of the cumulative effect of all activities to be performed to remediate the SSFL site in examining the serious consequences of DOE's proposed action. Under NEPA, a "cumulative impact" is "the impact of the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions . . ." (40 CFR Section 1508.7; see also *Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 999 (9th Cir. 2004).) When all SSFL activities are combined, the environmental impacts can be staggering, driven in large measure by the AOC LUT cleanups by both DOE and NASA. DOE's "incremental" contribution to these impacts under its Cleanup to AOC LUT Values is considerable. These cumulative environmental effects demonstrate how critical it is for each of the responsible parties to perform remediation activities in a manner that is protective of human health and the environment and that reduces significant environmental impacts.

Attached to this letter as Attachment C is an updated summary of Boeing's proposed activities at the site, including information that may not have been previously available to DOE prior to the preparation of this Draft EIS. Boeing previously provided this technical information to DTSC in May 2016 or earlier, and requests that DOE utilize this updated information for its analysis in the EIS.

XIII. MINIMIZING AND MITIGATION MEASURES

The Draft EIS identifies several measures to minimize adverse environmental impacts based primarily on applicable federal laws and regulations as well as the implementation of "green cleanup" principles. (Draft EIS, p. 6-1.) DOE notes that "[m]any of the listed minimization measures were developed in conjunction with the California Department of Toxic Substances Control, the National Aeronautics and Space Administration (NASA), and The Boeing Company (Boeing) for the proposed remediation of the entire SSFL." (Draft EIS, p. 6-2.) In addition to these minimization measures,

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The cumulative impacts of all the activities that are required to remediate the SSFL site have been updated in this Final EIS to use the latest information available for DOE, NASA, and Boeing. Remediation activities will be performed in a manner that is protective of human health and the environment and that reduces significant environmental impacts to the extent possible.

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The soils volumes and other cumulative impacts information presented in Chapter 5, Table 5-1, of the Draft EIS were up-to-date at the time the Draft EIS was prepared (see references to NASA 2015 and Boeing 2015b). Since the Draft EIS was released in January 2017, revised information has become available (NASA 2017b; Boeing 2017a, 2017b). Therefore, the NASA and Boeing values in Table 5-1 were updated in this Final EIS to reflect the latest information.

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Thank you for your comment. It has been added to the Administrative Record for the EIS.

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the Draft EIS identifies select potential mitigation measures to address the adverse effects identified for Surface Water, Biological Resources, Air Quality and Climate, Transportation/Traffic and Cultural Resources. (Draft EIS, p. 6-17.)

DOE acknowledges that these measures may change as the EIS process continues and as further consultation occurs on both biological and cultural resources with relevant authorities. Also, DOE has stated: “[T]his EIS has been prepared in a manner intended to provide a bridge to the DTSC program EIR.” (Draft EIS, p. 4-4.) Boeing anticipates that the minimizing and mitigation measures set forth in this Draft EIS will be coordinated with the mitigation measures to be prepared as a part of DTSC’s EIR. Boeing has identified any specific technical concerns regarding the minimizing and mitigation measures in the Table attached to this letter, and looks forward to continuing to work with DOE and NASA to ensure that all minimizing and mitigation measures are feasible so they may be properly implemented.

XIV. TABLE OF DETAILED COMMENTS TO SPECIFIC TEXT IN THE DRAFT EIS AND APPENDICES

Boeing has prepared detailed comments to specific text in the Draft EIS and the Appendices, which we have organized in a Table, attached to this letter as Attachment D.

XV. CONCLUSION

Boeing respectfully requests DOE’s consideration of its comments on the Draft EIS. Our comments are submitted to support DOE’s effort to perform a comprehensive NEPA evaluation of its action, and in particular, to support DOE’s efforts to evaluate risk-based alternatives for soil cleanup that protect human health and reduce adverse environmental impacts on this unique and valuable resource. This risk-based and less impactful approach is legally required given the statutory and regulatory context. In addition, because Boeing has committed to preserve the site as undeveloped open space, an alternative based on a recreational user should be evaluated in addition to an alternative based on the residential receptor. We hope that as DOE continues the NEPA process, DOE fulfills the intent and requirements of NEPA by developing and selecting a preferred alternative that achieves the purpose and need to protect human health and the environment, uses standard EPA risk assessment methodologies and protocols, minimizes cleanup-related impacts to the local community, fully takes into consideration how best to protect and preserve the unique biological and cultural resources at the site, and results in the fewest environmental impacts.

Again, Boeing appreciates the opportunity to submit these comments to DOE. We look forward to continuing to work cooperatively to ensure consistency in the environmental analyses for the cleanup activities at the SSFL.

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146-35 In accordance with NEPA and CEQ, DOE implementing regulations, this EIS evaluated a No Action Alternative and three soil remediation action alternatives for conducting cleanup activities in Area IV and the NBZ. As discussed in Chapter 2, Section 2.3.3, of the EIS, due to the technical issues with implementing the 2010 AOC, in addition to the Cleanup to AOC Look-Up Table Values Alternative, DOE evaluated action alternatives that would leave Area IV and the NBZ in a state that was protective of human health and the environment. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Section 2.4 of this EIS. Under the Conservation of Natural Resources Alternative, DOE included two scenarios that are based on potential impacts on 1) a recreational user (the Open Space Scenario) and 2) a suburban residential user without the garden pathway (Suburban Resident Scenario). DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in accordance with regulatory requirements. DOE recognizes that the regulatory requirements include DTSC’s authority with respect to the AOC and the Resource Conservation and Recovery Act. In order for cleanup to begin, DTSC first needs to complete its Environmental Impact Report developed under the California Environmental Quality Act (the Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California was issued by DTSC in 2017 [DTSC 2017b]) and issue its findings. It must also approve the soil and groundwater cleanup plans developed by DOE. The potential environmental impacts presented in this EIS, along with public and agency input, cost, policy, and other factors, will be considered by DOE in selecting alternatives for soil remediation, building demolition, and groundwater remediation for implementation.

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Director, Environment, Health & Safety, Boeing



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Should you have any questions regarding our comments or wish to discuss them, please contact Art
Lenox of my staff at [REDACTED]

Sincerely,

A handwritten signature in blue ink that reads 'S. L. Shestak'.

Steven L. Shestak
Director - Environment
Environment, Health & Safety
Mail code: 110-SE17

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Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

ATTACHMENT A

Regional Map, Offsite Soil Sampling in Parks and Open Space Areas
Santa Susana Field Laboratory

and

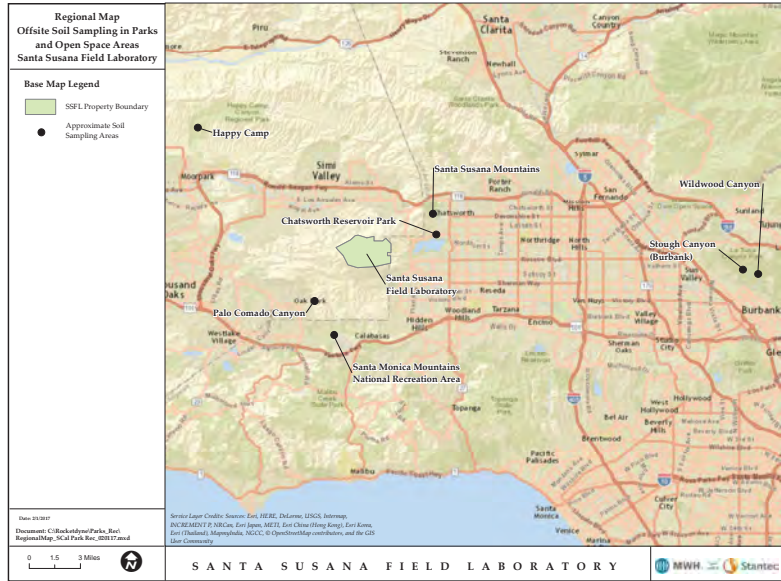
Detected Chemical Results from Offsite Park and Open Spaces
Within 3 to 25 Miles of Santa Susana Field Laboratory

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Director, Environment, Health & Safety, Boeing

Attachment A - Figure 1



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Director, Environment, Health & Safety, Boeing**

Attachment A
Detailed Chemical Results from Office Park and Open Space
Within 3 to 25 Miles of Santa Susana Field Laboratory

Chemical Name	LUF Value	Chattworth Reservoir Park			Happy Camp			Palo Verde Canyon			Santa Monica Mountains National Recreation Area			Santa Susana Mountains			Sagehen Canyon			Wildwood Canyon		
		Open			S00001			S00002			S00003			S00004			S00005			S00006		
		Result	Qual	Unit	Result	Qual	Unit	Result	Qual	Unit	Result	Qual	Unit	Result	Qual	Unit	Result	Qual	Unit	Result	Qual	Unit
Acetone	5	ND																				
2,3,7,8-TCDF	0.125-0.7	1.14E-03																				
Chlorine	0.01	0.01																				
Sulfur	5	1000																				
Antimony	0.06	0.01																				
Arsenic	05	0.5		3.3		0.4		2.2		1.1		1.1		1.1		1.1		1.1		1.1		0.05
Boron	0.01	0.01																				
Beryllium	2.2	0.05		0.05		0.11		0.11		0.11		0.11		0.11		0.11		0.11		0.11		0.11
Barium	04	0.1																				
Cadmium	0.7	0.25		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.2		0.01
Chromium	04	0.1																				
Cobalt	04	0.1																				
Copper	100	10		10		10		10		10		10		10		10		10		10		10
Lead	0.0001	0.0001																				
Lithium	0.01	0.01																				
Manganese	100	100																				
Mercury	0.01	0.01																				
Nickel	1	0.43		ND		0.4		0.4		0.4		0.4		0.4		0.4		0.4		0.4		0.4
Silver	0.2	0.001		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
Titanium	1.0	0.21		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
Zinc	0.01	0.01																				
Aluminum	0.05	0.05																				
1,1-Dichloroethane	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
1,2-Dichloroethane	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
1,1,1-Trichloroethane	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
1,1,2-Trichloroethane	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
1,2-Dichlorobenzene	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
1,4-Dichlorobenzene	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
Phenol	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
Phenylacetone	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND
Diethylamine	0.0005	0.0005		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND

* 2,3,7,8-TCDD is a calculated value based on detected dibenzofuran results using the World Health Organization's 2,3,7,8-TCDD toxicity equivalence approach for dibenzofurans (2005).
 B = the analyte was also found in a blank sample
 I = the value is an estimate
 LUF = AQS LUF Value
 ND = analyte not detected
 QC = reporting limit used due to sample matrix effect
 Qual = Validation qualification code
 TCCD = Toxicity Equivalent
 TCCD = tetrahydrodibenzodioxin
 -- not analyzed

McLaren/Hart, 1993a. Work Plan for Additional Soil and Water Sampling at the Braden-Bardin Institute and Santa Monica Mountains Conservancy. October.
http://www.erie.energy.ca.gov/environmental_and_health/braden_bardin.html
 McLaren/Hart, 1993b. Multi-Media Sampling Report for the Braden-Bardin Institute and the Santa Monica Mountains Conservancy, Volume 1. Final Report. March.
http://www.erie.energy.ca.gov/environmental_and_health/braden_bardin.html
 MWH, 2007. Office Data Evaluation Report, Santa Susana Field Laboratory, Ventura County, California. December.
http://www.erie.energy.ca.gov/OSR/OSR/braden_bardin/OSR2007.html

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Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

ATTACHMENT B

Published Background Values vs. Area IV AOC Lookup Table Values
Santa Susana Field Laboratory

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**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Attachment B
Published Background Values vs. Area IV AOC Lookup Table Values
Santa Susana Field Laboratory

Analyte	CASNumber	Units	Area IV LUTV	California Benchmark Soils (Kearney study, March 1996)			California Air Force Bases (Hunter et al, 2005)		Ambient Dioxin (USEPA, 2000, 2001)	Regional BG Value(s) > LUTV?
				Mean	Minimum	Maximum	95th Percentile	99th Percentile		
Aluminum	7429905	mg/kg	58,600	73,000	30,000	106,000	23,000	31,300	n.a.	yes
Antimony	7440360	mg/kg	0.86	1	0.15	1.95	12.5	25	n.a.	yes
Arsenic	7440382	mg/kg	46	4	0.6	11	12.7	23.2	n.a.	no
Barium	7440393	mg/kg	371	509	133	1400	320	584	n.a.	yes
Beryllium	7440417	mg/kg	2.2	1	0.25	2.7	1.1	5.6	n.a.	yes
Boron	7440428	mg/kg	34	19	1	74	140	201	n.a.	yes
Cadmium	7440439	mg/kg	0.7	0	0.05	1.7	2.3	7.7	n.a.	yes
Chromium	7440473	mg/kg	94	122	23	1579	49.4	300	n.a.	yes
Cobalt	7440484	mg/kg	44	15	2.7	46.9	22	35.9	n.a.	yes
Copper	7440508	mg/kg	119	29	9.1	96.4	53.3	157	n.a.	yes
Fluoride	16984488	mg/kg	10.2	n.a.	n.a.	n.a.	8.9	23	n.a.	yes
Iron	7439896	mg/kg	37,000	10,000	87,000	35,100	49,400	n.a.	n.a.	no
Lead	7439921	mg/kg	49	24	12.4	97.1	25	148	n.a.	yes
Lithium	7439932	mg/kg	91	23	4	90	n.a.	n.a.	n.a.	no
Manganese	7439965	mg/kg	1,120	646	253	1687	823	1,600	n.a.	yes
Mercury	7439976	mg/kg	0.13	0	0.05	0.9	0.3	0.6	n.a.	yes
Molybdenum	7439987	mg/kg	3.2	1	0.1	9.6	20	44	n.a.	yes
Nickel	7440020	mg/kg	132	57	9	509	41.5	85.4	n.a.	yes
Potassium	7440097	mg/kg	14,400	17,300	2,100	30,000	n.a.	n.a.	n.a.	yes
Selenium	7782492	mg/kg	1	0	0.015	0.43	11	25	n.a.	yes
Silver	7440224	mg/kg	0.2	1	0.1	8.3	2.1	6.1	n.a.	yes
Sodium	7440235	mg/kg	1,780	15,838	5,580	73,400	1,660	3,980	n.a.	yes
Thallium	7440280	mg/kg	1.2	1	0.17	1.1	25	173.5	n.a.	yes
Vanadium	7440322	mg/kg	175	112	39	288	88.3	126	n.a.	yes
Zinc	7440666	mg/kg	215	149	88	236	104	307	n.a.	yes
Zirconium	7440677	mg/kg	19	93	19	610	n.a.	n.a.	n.a.	yes
2,3,7,8-TCDD TEQ	1746016-TEQ	pg/g	0.912	n.a.	n.a.	n.a.	n.a.	6	n.a.	yes

Total Constituents where BG > LUTV^{*}: 24
Total Constituents Evaluated: 27
Percentage of Constituents > LUTV^{*}: 89%

* Totals/percentages include constituents where either the Maximum California Benchmark Soils, 99th percentile for California Air Force Bases, or Western US Ambient Dioxin background concentrations exceed the Area IV LUTV.

Notes:

1. Regional background for 2,3,7,8-TCDD TEQ (dioxins/furans) range from 1 to 6 pg/g (USEPA 2000, 2001) which exceeds the Area IV Look-Up Table Value (LUTV) of 0.912 ppt.
2. Yellow highlight and bold indicates a constituent where the maximum regional background value exceeds the DTSC Area IV LUTV.

Acronyms:

BG = Background mg/kg = milligrams per kilogram pg/g = picograms/gram
DTSC = Department of Toxic Substances Control n.a. = not available USEPA = United States Environmental Protection Agency
LUTV = Look-Up Table Value

References:

Hunter, P.M., Davis, B.K., and Roach, F. 2005. Inorganic Chemicals in Ground Water and Soil: Background Concentrations at California Air Force Bases. Poster presentation at the 44th Annual Meeting of the Society of Toxicology, New Orleans, Louisiana, March 10.
http://www.dtsr.ca.gov/AssessingRisk/updates/Inorganics_Handout.pdf

Kearney 1996. Background Concentrations of Trace and Major Elements in California Soils. Kearney Foundation of Soil Science, Division of Agriculture and Natural Resources, University of California. March.
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Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

ATTACHMENT C

Data for Cumulative Impacts Analysis of SSFL Remediation for DOE EIS
Boeing Remediation Project Estimates, April 2017

146-33
cont'd

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Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Attachment C
Data for Cumulative Impacts Analysis of SSFL Remediation for DOE EIS –
Boeing Remediation Project Estimates, April 2017

	<i>Boeing</i>
Land disturbed (acres)	
– Area Disturbed for Soil Removal	17 - 46
– Area Disturbed for Building Removal	3
Employment (persons)	
– Onsite Employees	100
– Truck Drivers - Truck drivers for occasional deliveries or pickups are not included in long-term employment	Assume 16 to 32 truck drivers when 96 truck trips are split between NASA, Boeing and DOE.
Resources used	
– Backfill for Soil Excavation (cubic yards)	50,000 to 88,300 (a)
– Backfill for Building and Bedrock Removal (cubic yards)	1,300
Resources used	
– Water (gallons/day)	20,000 (c)
Waste generated (cubic yards)	
– Soil Excavation	150,000 to 265,000 (b)
– Building Removal	112,000 (d)
– Bedrock Excavation	None expected
Truck trips	
– Soil Disposal	9,800 to 17,300 (e)
– Bedrock Disposal	None expected
– Backfill Delivery	3,300 to 5,800 (f)
– Demolition Debris	1,000 (g)
– Other deliveries	400
Totals	14,500 to 24,500

Boeing = The Boeing Company;

- (a) Estimates assume that approximately 33% of excavated soil volume will be needed as backfill obtained from other sources to supplement surrounding soils used as backfill to restore the soil remediation area. Range of backfill volume provided to represent the range of Boeing excavation volumes.
- (b) Estimated in situ soil excavation volume for cleanup to protect hypothetical future resident and ecological receptors for DOE EIS planning. Range includes other risk assessment factors and contingency for additional soil volume removal during implementation.
- (c) Water use estimated based on generalized data regarding water use for prior soil removal activities at SSFL and comparable information for other MWH/Stantec soil remediation projects.
- (d) Building debris cubic yard volume based on 1.5 cy per ton to maintain consistency with soil volume estimates. Actual debris volume will be dependent on type of material.
- (e) Estimates assume 1.5 cy per ton of soil, and 23 tons per truck average. Range in number of trucks provided to represent range in Boeing soil volumes.
- (f) Trucking estimates for backfill delivery provided for conservative planning estimates. To minimize truck trips, Boeing plans to use the trucks that bring clean backfill to the site from offsite sources for subsequent off-haul of contaminated soil. Also, Boeing may use onsite sources of backfill. In both of these cases, the truck trips estimated here would be minimized or eliminated.
- (g) Trucking estimate for building debris removal based on an average truck volume of 17 ey based on prior Boeing demolition projects.

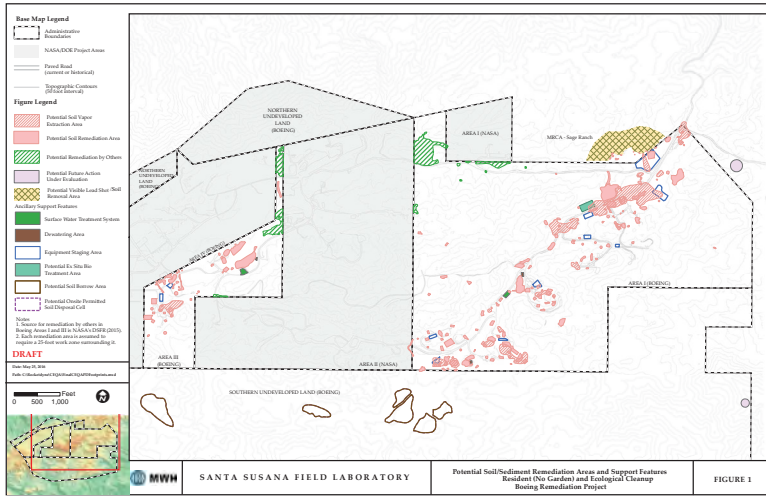
Attachments:

Figure 1 - Potential Soil/Sediment Remediation Areas and Support Features, Resident (No Garden) and Ecological Cleanup, Boeing Remediation Project

Figure 2 – Boeing-Owned Former Radiological Buildings in Area IV for Demolition

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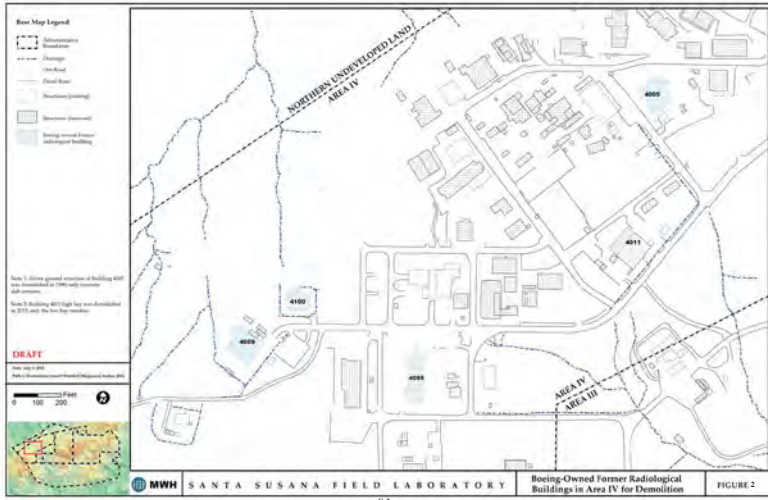
Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing



C-2

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Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing



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Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

ATTACHMENT D

Table of Detailed Comments to Specific Text in the Draft EIS and Appendices

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**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

ATTACHMENT D: TABLE OF DETAILED COMMENTS TO SPECIFIC TEXT IN THE DRAFT EIS AND APPENDICES

Page No.	Section	Comments
LAND RESOURCES		
3-8	3.1 - Land Resources	Please update this section to reflect the correct status of the natural gas lines as inactive and abandoned in place by Southern California Gas Company.
3-9	3.1.1.2 Infrastructure	Please update Figure 3-4, Santa Susana Field Laboratory Electrical Distribution System, to include all utility poles at the SSFL.
4-9	4.1-Land Resources	Table 4-5 Land Resources impacts under the Soil Remediation Alternatives states that there will be 10 years of soil removal under the Cleanup to LUT. This number appears low, particularly if some soil excavation and restoration activities will not occur thru the months of December – May (Chapter 6, Table 6-2) to mitigate potential surface water impacts. Please confirm that the 12 year estimate provided elsewhere in the Draft EIS includes 10 years of soil removal, and that these estimates include potential down time related to surface water mitigation measures. In addition, we request DOE provide a comprehensive schedule and impact analysis that includes the entirety of soil that may require excavation and offsite transport of (1) the baseline 933,000 cubic yards of soil, (2) the 330,000 cubic yards proposed for cultural or biological exemptions, (3) the 150,000 cubic yards of soil assumed for natural attenuation, and (4) the remaining additional cubic yards of soil that represent the high end of the estimate (2.5 Million cubic yards).
	4.1.1 Soil Remediation Alternatives Table 4.5	
GEOLOGY AND SOILS		
5-24	5.10 – Alternatives	Consider that it may take longer than six weeks as currently noted in the Draft EIS for U.S. EPA and DTSC to complete the verification process of collecting confirmatory samples following soil removal.
	5.10.2.2 Cleanup to AOC Look-Up Table Values Alternative	
2-56	2.8 - Summary of Potential Environmental Consequences	The Draft EIS states in Section 2.8: "Under all soil remediation action alternatives, no adverse impacts on bedrock geologic resources are expected."
4-36	4.2. Geology and Soil	The Draft EIS then states in Section 4.2.4: "Excavation of 1,050 cubic yards of subsurface bedrock is assumed under action alternative combinations that include the Groundwater Treatment Alternative (such as the High Impact Combination). Excavation of this bedrock would have minimal potential adverse impacts on bedrock geologic resources."

D-1

146-36

146-36 The text of this Final EIS was revised to address this comment.

146-37

146-37 Please refer to DOE's response to comment 146-25.

146-38

146-38 Please refer to DOE's response to comment 146-12. In this Final EIS, DOE has included a sensitivity analysis to assess the potential impacts of remediating a larger volume of soil under the Cleanup to AOC LUT Values Alternative. A comprehensive schedule does not exist for the implementation of this scenario, but it would be based on the transport of excavated materials by 16 truck trips per day, the same assumption used in the baseline analysis of Chapter 4. The duration of the cleanup activities would be expected to increase proportionally to the amount of soil being removed.

146-39 DOE acknowledges the verification process could take longer and that any delay by EPA and DTSC to confirm that analytical data meets AOC LUT values could impact soil remediation and restoration schedules. This Final EIS includes language acknowledging that this is one factor that could affect the remediation schedule.

146-40

146-40 By "no adverse impacts on bedrock geologic resources" DOE was indicating that surficial (exposed bedrock) would not be impacted during surface soil removals. The 1,050 cubic yards of bedrock relates to subsurface bedrock impacted by strontium 90 removed to protect groundwater. The text of this Final EIS was revised for clarity.

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
	4.2.4 Geology and Soil Impacts under All Action Alternative Combinations	Please explain this apparent contradiction, and also consider whether scraping marks on bedrock from heavy equipment similar to that which had been observed in other areas of the Site during other remediation activities, e.g., the Interim Source Removal Action performed under the oversight of the Regional Water Quality Control Board, Los Angeles Region, may occur. Please also explain whether the proposed bedrock excavation has been factored into the analysis of potential impacts to sensitive species that grow from bedrock cracks, e.g., the Santa Susana tarplant.
3-17	3.2 - Geology and Soils Figure 3-10	Figure 3-10, Geologic Map of Area IV and the Northern Buffer Zone, does not use the most recent fault and fine grained unit information. It appears that the 2009 Groundwater Remedial Investigation report features are presented on this Figure. Please update this information.
3-21	3.2 - Geology and Soils 3.2.5. Extent of Soil and Bedrock with Concentrations of Chemicals and Radionuclides Exceeding Look-Up Table Values	We suggest that the reference to bedrock with concentrations exceeding Look-up Table (LUT) Values in the title of these two sections (3.2.5 and 3.2.5.4) be removed, or separate sections be prepared, as the sections do not address bedrock. Also, unweathered bedrock is not a media within the scope of the AOC, so the LUT values do not apply.
3-29	3.2.5.4 Areas of Soil and Bedrock with Concentrations of Chemicals and Radionuclides Exceeding Look-Up Table Values	
3-22	3.2 - Geology and Soils	The Draft EIS states: "Production of rocket engine fuels and igniters in Area IV also contributed to releases of chemicals to the environment". This information is not accurate. Historical site operational information does not indicate that rocket engine fuels or igniters were produced in Area IV; although Building 4373, the Systems for Nuclear Auxiliary Power (SNAP) Critical Facility, was designed as a solid propellant mixing facility, there is no evidence that it was ever used for this purpose or for testing or production of rocket engine fuels. (<i>Historical Site Assessment of Area IV, Santa Susana Field Laboratory</i> (Sapere, 2005); <i>Final Technical Memorandum, Subarea 5D, Historical Site Assessment, Santa Susana Field Laboratory Site, Area IV Radiological Study</i> (HydroGeologic, 2012). There are detections of perchlorate (a high-energy chemical used in igniters and flares) in soil and groundwater near the Former Sodium Disposal Facility (FSDF), and at other locations in soil within Area IV. Although perchlorate may have been released in Area IV, its operational use is not documented. Please revise this statement.

D-2

146-41

146-41 The Interim Source Removal Action bedrock excavations were performed by Boeing. Chapter 6, Section 6.1 has been revised to indicate that, DOE, during soil removals, will take measures to minimize impacts to adjacent bedrock. DOE has no plans to excavate surficial bedrock or cracks. The only bedrock proposed for excavation (see Chapter 2, Section 2.6.3 of this Final EIS) is below the ground surface where vegetation does not grow into it. Therefore, the proposed bedrock excavation activities would not affect any sensitive species in bedrock cracks, such as the Santa Susana tarplant.

146-42

146-42 DOE used the description of the SSFL fault networks that was available when the Draft EIS was prepared. DOE is aware that since the release of the Draft EIS, Boeing has updated its description of the faults and the description of fine-grained units within Area IV. Chapter 3, Section 3.2 of this Final EIS was revised to incorporate the most recent description of the geology of Area IV and the NBZ that has been accepted by DTSC.

146-43

146-43 Chapter 3, Section 3.2.5 of this Final EIS was corrected. The soil AOC LUT values do not apply to bedrock.

146-44

146-44 This Final EIS was revised to remove the reference to rocket fuel development in Area IV.

**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Page No.	Section	Comments
3-28		The Draft EIS states: "The former 17th Street Pond was a man-made pond that received drainage from the Process Development Unit." Please correct this statement to include other operational releases that contributed to discharges received by the former 17 th Street Pond. This pond was a man-made feature that received stormwater runoff and operational releases from up-gradient facilities in the central portion of Area IV including several RFI sites and adjacent buildings. These included the Process Development Unit (PDU), the Radioactive Materials Handling Facility (RMHF), the SNAP Environmental Test Facility (SETF), the Sodium Component Test Installation (SCTI), the Sodium Component Test Laboratory (SCTL), and various other operational buildings within the central portion of Area IV (e.g., Buildings 4007, 4008, 4011, 4010, and 4093).
3-22	3.2 - Geology and Soils 3.2.5.1 Sources of Chemicals and Radionuclides	Please revise the description of the Area IV Former Sodium Disposal Facility (burn pit) to state that the disposal of radionuclides in this facility was inadvertent.
6-4	6.2 - Potential Mitigation Measures Table 6-1 Measures to Minimize Impacts of Demolition and Remediation Activities	Item 2-4, Soil backfilling. Given the difficulty of finding soil that meets AOC LUT Values, we suggest that the verification process associated with any backfill should occur prior to any excavation work. Otherwise, mitigation measures should be identified to protect against potential impacts associated with semi-permanent, wide and deep excavations, e.g., rain accumulation, wildlife accidents. Also, the mitigation measure may need to be revised for alternatives other than the Cleanup to AOC LUT Values alternative. Item 2-5, Stockpiling and staging. We suggest that DOE address the practical aspects of stockpiling and staging soils in addition to addressing erosion, landslides, and disturbance of habitat.
6-5		Item 2-8, Post-remediation Monitoring. Please revise this measure to clarify that periodic sampling to assess soil concentrations following the natural degradation process applies only to soils impacted with TPH.
SURFACE WATER		
6-17	6.2 - Potential Mitigation Measures Table 6-2 Potential Mitigations	Item SW-2. Consider modifying this mitigation as follows (deletions shown as strikeouts and additions shown in bold): "... runoff studies observations indicate the NPDES that the landowner's (Boeing's) sitewide stormwater control system design capacity would be exceeded"

146-45

146-45 The commenter is correct that the Process Development Unit (PDU), although the largest facility upgradient of the former 17th Street Pond, is not the only source for pond contamination. Chapter 3, Section 3.2.5.3 of this Final EIS was revised to address this comment.

146-46

146-46 Chapter 3, Section 3.2.5.1 of this Final EIS was revised to note that the disposal of radionuclides in the Area IV Former Sodium Disposal Facility (burn pit) was inadvertent.

146-47

146-47 DOE acknowledges the comment regarding the verification process for backfill. DOE would not initiate soil removal until a source of backfill approved by DTSC has been identified. DOE's Proposed Action includes measures to control water ponding and conditions that could trap wildlife. This would include the installation of temporary fencing around any steep-faced excavations.

146-48

146-48 The practicality of stockpiling and staging soils will be addressed in the Soils and Remedial Action Implementation Plan (SRAIP). The SRAIP will include the Soils Remedial Design that will detail the technical and operational plans for soil remediation within Area IV and the NBZ. This EIS evaluates impacts resulting from the implementation of the remedial alternatives.

146-49

146-49 Chapter 6, Table 6-1, of this Final EIS, was revised to clarify that periodic sampling to assess soil concentrations following the natural degradation process applies only to soils impacted with TPH.

146-50

146-50 Chapter 6, Table 6-2 Mitigation Measure SW-2 of this Final EIS was revised as suggested in this comment.

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
GROUNDWATER RESOURCES		
	S.10-Alternatives	Regarding the evaluation of groundwater remediation alternatives generally, consider whether the following items should be further evaluated in the EIS: 1) Chemical and/or radiological impacts to vadose (or unsaturated) zone bedrock (identified in the 2007 Consent Order as part of the Chatsworth Formation Operable Unit), 2) Groundwater as a receptor of chemical transport from soil, and 3) Inclusion of all chemicals with exceedances of groundwater screening criteria that fall within the broader plume boundary, for each plume shown in Figure S-9.
	S.10.4 Groundwater Remediation Alternatives	
	2.6 Groundwater Remediation Alternatives	Also, the number of monitoring wells, constituents to monitor, and duration of monitoring may be understated. We suggest that the evaluation of groundwater remediation alternatives consider some treatment and/or containment in source areas along with a monitored natural attenuation (MNA) remedy since this may be required.
S-47	S.10.4.3 Groundwater Monitored Natural Attenuation Alternative	For MNA alternative, consider that abiotic reactions with naturally-occurring minerals also degrade some contaminants that include chlorinated ethane, in addition to dilution and dispersion in groundwater. Please provide the basis for the estimated duration of 10-50 years for MNA.
S-48	S.10.4.4 Groundwater Treatment Alternative	Consider whether Sr-90 will be addressed by lowering the phreatic surface or if doing so will only prevent its occurrence from being detected in the saturated zone, as it will remain bound to solid surfaces.
S-64	Table S-9	In Table S-9 Land Resources/Groundwater Treatment, the estimated duration of five years for the treatment system appears short given diffusion-controlled hydrogeologic and contaminant transport conditions, and the basis for the estimate is not provided in the Draft EIS.
2-46	2.6 Groundwater Remediation Alternatives	Please note that responsibility as between DOE and Boeing for the groundwater plumes in Area IV have not yet been determined so it is premature to state that the groundwater remediation in portions of Area IV will involve Boeing addressing groundwater "plumes" for which it is responsible in an integrated effort with DOE. Suggest replacing "plumes" with "plume(s)."
2-50 2-51	2.6.1.2 Groundwater Monitored Natural Attenuation Alternative	The basis for the degradation rates for the plumes until constituents are below MCLs is not provided in the EIS. (The reference document provided (CDM Smith 2015a) does not contain this information.) It is unclear why the same 20 year estimate is provided for two plumes where one plume has twice the concentration of TCE of the other.
2-53		It appears that well abandonment, a process that involves drilling equipment and materials disposal, has been not been addressed in the discussion of alternatives.

D-4

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146-51 These items were considered during development of the *Draft RCRA Facility Investigation Groundwater Investigation Report for Area IV Ventura County, California* (CDM Smith 2018a) and *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b). The text of this Final EIS was revised to incorporate relevant information from these reports and the findings of the remedy evaluations."

146-52 As described in Final EIS Chapter 2, Section 2.6, this EIS considers treatment, containment, and monitored natural attenuation as potential groundwater remedies.

146-53 Chapter 2, Section 2.6.2, of this Final EIS, was revised to note this additional potential contaminant decay mechanism.

146-54 The Area IV Groundwater RFI Report, which is the basis for the evaluation of groundwater data, has been revised to address the assessment of plume degradation timing. A summary of that assessment has been incorporated into this Final EIS (Chapter 2, Section 2.6.2).

146-55 A *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) was developed independently from this EIS; the study evaluated the corrective action technologies and alternatives to be applied as remedial actions. Appropriately, the comment was addressed in the Corrective Measure Study in which groundwater remediation technologies relevant to Area IV are assessed. The analysis in this EIS is the evaluation of the impact of implementing these alternative technologies. Within the EIS, DOE provides an assessment of the impacts of implementing the technologies.

146-56 As noted in Appendix D, Section D.6.5, of this Final EIS the operational period of pump and treat systems assumed for the EIS analysis (5 years) was based on historical experience with the outcomes of pump and treat actions at Area IV. (Appendix D provides the results of the pump and treat activities within Area IV.) As noted in Chapter 2, Section 2.6.3, of this Final EIS pump and treat activities would continue until the cleanup goal is met. DOE has performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Information from the groundwater remedial investigation was used in the *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) to more fully evaluate groundwater treatment options.

146-57 DOE disagrees. In its *Groundwater RI Report* (MWH 2017), Boeing has accepted responsibility for certain groundwater issues in Area IV. Additionally, the 2007 Consent Order identifies Boeing's responsibilities in this area.

**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Page No.	Section	Comments
3-38	3.4 - Groundwater Resources 3.4.1 Groundwater Zones	Please note that it is estimated that most groundwater flow in the unsaturated zone is through the rock matrix and only about one-fifth of the flow is through the fracture network in the competent rock. (<i>Site-Wide Groundwater Remedial Investigation Report, Santa Susana Field Laboratory</i> (MWH, 2009); <i>Conceptual Model for the Migration and Fate of Contaminants at the Santa Susana Field Laboratory</i> (Cherry, et. al., 2009).
3-40-41	3.4.2.1 Former Sodium Disposal Facility Trichloroethylene Plume	The EIS does not indicate that in addition to TCE, 1,1,1-TCA in perched groundwater and 1,1-DCE and CCl ₄ in CFOU groundwater are present in this plume.
BIOLOGICAL RESOURCES		
1-20	1.9 - Public Involvement	<i>Rana aurora draytonii</i> has changed to <i>Rana draytonii</i> .
3-58	3.5 - Biological Resources 3.5.3.2 Grasslands (Native and Nonnative)	The Draft EIS states: "Common reptile species include western whiptail lizard (<i>Aspidoscelis [Cnemidophorus] tigris</i>), side-blotched lizard (<i>Uta stansburiana</i>), and western fence lizard (<i>Sceloporus occidentalis</i>)." Coastal western whiptail was previously on the CDFW Special Animals list, and has now been upgraded to a California Species of Special Concern (similar to coast horned lizard in the next paragraph). The Draft EIS also states: "Two reptiles that are known to occur throughout SSFL, including Area IV and the NBZ, in open areas with little vegetation are the silvery legless lizard (<i>Anniella pulchra pulchra</i>) and coast horned lizard (<i>Phrynosoma coronatum blainvillii</i>); these two species are considered California species of special concern." Consider adding the following language to this section: "Legless lizard is also known, and has been observed at SSFL beneath oak tree duff, and in ephemeral drainages." In addition, there are other California species of special concern that have been observed at SSFL that may be expected to occur within annual grassland and other habitats. Certain first callouts of plants and wildlife are provided with their non-federal special-status designations for informational purposes (e.g., mariposa lilies), while others don't receive this text (e.g., ringtail and golden eagle). For consistency, consider providing any special-status designation for all of the species at their first callout.
3-58 and onward, possibly earlier		
3-59	3.5 - Biological Resources	The Draft EIS states: "Honey bees (<i>Apis mellifera</i>) were observed to have large combs among the rocks on Area IV and the NBZ at several locations (SAIC 2009a)." Consider referencing the Galea et al. (2016) study of pollinators on the Santa Susana tarplant, which included plots within Area IV, and identified the fact that multiple native bees (not just European honey bees) were also observed foraging on Santa Susana tarplant.

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- 146-58 The *Draft Area IV RCRA Corrective Measures Study* (CDM Smith 2018b) was completed after the issuance of the Draft EIS. The text of this Final EIS was revised to incorporate the findings of the remedy evaluations and clarify the MNA durations for the groundwater contamination plumes. Note that in Chapter 4, Table 4-22, of this Final EIS the monitoring timeframes for the two plumes referred to in the comment have slightly different durations. The timeframe for the plume with the higher concentration is listed as more than 20 years, while the timeframe for the plume with the lower concentration is listed as about 20 years. While similar these descriptions of the timeframes reflect that the higher concentration plume would be monitored for a longer time.
- 146-59 Chapter 2, Section 2.6, of this Final EIS was revised to include the potential for well abandonment following groundwater remedy completion.
- 146-60 Thank you for the information on groundwater flow. In addition, DOE has performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS was updated to include new information on groundwater flow in Area IV and the NBZ. The reports cited in this updated section are included as references for this Final EIS and are available for review on DOE's website.
- 146-61 Chapter 3, Section 3.4.3.1 of this Final EIS was revised to include 1, 1, 1-TCA and 1, 1-DCE in the description of contaminants in the Former Sodium Disposal Facility (FSDF) groundwater. Regarding carbon tetrachloride (CCl₄), DOE disagrees. Carbon tetrachloride has never been detected in any of the more than 250 groundwater samples collected at the facility. Carbon tetrachloride is associated with well RD-21 which is adjacent to the Empire State Atomic Development Agency (ESADA) site (about 800 feet south of the FSDF) and part of a different location of impacted groundwater.
- 146-62 The scientific name for California red-legged frog was updated.
- 146-63 The text in this Final EIS was revised accordingly.
- 146-64 The text in this Final EIS was revised accordingly.
- 146-65 The special-status designation is now provided for all species at their first callout in this Final EIS.
- 146-66 The text in this Final EIS was revised to state that multiple native bees were observed foraging on Santa Susana tarplant.

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
3-68	3.5 - Biological Resources Table 3-8 Federally and State-Listed Animal Species that May Occur in Area IV and the Northern Buffer Zone	The Draft EIS states: "Subsequent protocol surveys conducted during 2010, 2011, and 2012 encompassing suitable habitat on Area IV and the NBZ (Griffith Wildlife Biology 2010, 2011, 2012) revealed no California gnatcatchers on site, nor have gnatcatchers been observed during other surveys of Area IV and the NBZ. Based on this information and current conditions, this species may be an occasional visitor; however, it appears unlikely that this species would breed in Area IV." Consider adding the following reference to this section: "Forde (2014) also had similar findings from protocol surveys performed in portions of Area I, III and SBZ on behalf of Boeing."
3-71	3.5 - Biological Resources	The Draft EIS states: "Subsequently, protocol surveys encompassing Area IV and the NBZ were conducted during 2010, 2011, and 2012 in support of EPA vegetation clearing and gamma scanning activities (Griffith Wildlife Biology 2010, 2011, 2012) and did not reveal any coastal California gnatcatchers, nor have coastal California gnatcatchers been observed during other surveys of Area IV and the NBZ. Consider adding the following reference to this section: "Forde (2014) also had similar findings from protocol surveys performed in portions of Area I, III and SBZ on behalf of Boeing."
4-57	4.5 - Biological Resources Table 4-26	In Table 4-26 Vegetation and Habitat Removed (acres and percent of total) by Soil Remediation Action Alternative, the column containing % Total for the Cleanup to Revised LUT Values appears to be in error. None of the percentages correlate to the acreage in each cell divided by the acreage in the Total Habitat column.
5-16	5.5 - Results of the Cumulative Impact Analysis	The Draft EIS states: "It (Santa Susana tarplant) has the potential to be directly affected by DOE, NASA, and Boeing remediation activities, but the degree to which it would be directly affected by remediation activities is probably low because most individuals grow in small fissures in sandstone outcrops that would generally not be removed or otherwise directly affected as part of remediation because of their location outside of areas affected by chemicals or radionuclides." In Area I, a substantial number of tarplants are growing in previously disturbed areas where asphalt or buildings have been removed and nearby plants have provided a seed source for 100s of plants to germinate. If these areas need remediation too, then the potential for tarplant mortalities may increase cumulatively for all of SSFL.

146-67

146-67 Text and references were added to this Final EIS, as suggested.

146-68

146-68 Thank you for your comment. Table 4-26 in this Final EIS was revised accordingly.

146-69

146-69 Thank you for your comment. Updates to Chapter 5, Section 5.5.5, of this Final EIS, have been made accordingly.

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
6-6	6.2 - Potential Mitigation Measures Table 6-1 Measures to Minimize Impacts of Demolition and Remediation Activities	Item 5-1, General biology, fourth bullet. Consider whether "at all times" should be further clarified as constant monitoring is not typically required. Item 5-1 and 5-4. Consider the following changes, noted in bold: Item 5-1, General biology, fourth bullet. Consider replacing "At least 7 days before" with " Prior to " to allow the potential to access the work area in less than 7 days. Item 5-4, Revegetation and habitat restoration. Consider identifying the measure associated with the Weed Management Plan: "Weed Management Plan (Item 5-9)."
6-7		Item 5-4, Revegetation and habitat restoration, third bullet. Consider deleting or modifying the following language: "(a minimum of two growing seasons prior to the initial need for post-remediation revegetation)." Some plantings may be root-bound, and only one season would be needed.
6-8		Item 5-4, Revegetation and habitat restoration, fifth bullet. Consider deleting or modifying "Weed-free" in the beginning of the sentence. Backfill soils onsite would likely contain a certain amount of non-native annual grasses.
6-9		Item 5-6, Protect wildlife during construction, first bullet. Consider adding the bolded language to the second sentence: "Special attention will be paid by project personnel to vehicles that have been sitting overnight and any excavated areas that have been left unattended for more than 1 hour." This language would allow project work crews to address these issues.
		Item 5-7, Special-status species, including Braunton's milkvetch. Consider modifying the buffer distances in first and fourth bullets to 100 feet, consistent with standard practices, and adding the following bolded language to the fifth bullet to clarify that this work is part of the Revegetation and Habitat Restoration Plan: "and implemented as part of the RHRP ".
6-10		Item 5-8, Special-status species, vernal pools and vernal rock pools. Consider modifying the buffer distances in first and second bullets to 250 feet, consistent with standard practices. Item 5-9, Weeds. Consider dry-truck cleaning measures (rumble strips, brushing) instead of power-washing and consider deleting the following sentences: "While washing wheeled vehicles, the front wheels will be turned lock-to-lock to allow for exposure of surfaces that may hold soil or weed seeds to ensure complete removal of foreign soil and seeds" and "For areas where vegetation and soil are removed and salvaged, treatment of the area to be disturbed will be implemented to kill weeds and limit weed seed production at least one full growing season prior to initiating any activity, with the objectives of (1) preventing weeds from spreading out of the disturbance area and (2) removing weed sources from salvaged topsoil."

D-7

146-70

146-70

Thank you for your comment. Edits have been incorporated as appropriate.

**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Page No.	Section	Comments
Page C-13	Appendix C- Alternatives Development	Consider replacing asphalt roads with gravel roads to enhance the natural condition of the area. In addition, consider use of areas where roads have been removed to allow for active or passive restoration of larger swaths of vegetation.
	Appendix G - Human Health Appendix J - Cost Benefit Analysis	Boeing suggests that DOE evaluate potential hazards to ecological receptors in Area IV and the NBZ, in accordance with standard risk assessment practice for protection of the environment, and that Appendices G and J be modified to account for these additional evaluations.
NOISE		
4-93, 4-94	Section 4.7 Noise Section 4.7.1.2 Cleanup to AOC LUT Values Alternative	The Draft EIS indicates that noise levels along Woolsey Canyon Road would increase from 1.5 dBA to 3.5 dBA (increasing from 55.7 dBA to 57.2dBA through 59.2 dBA) depending on the number of trips, but also acknowledges that "individual SSFL truck by-pass events generate maximum roadside noise levels between 80 and 95 dBA, with the loudest noise levels associated with engine braking." Using time-averaged noise levels seems to minimize substantial noise impacts, particularly along Woolsey Canyon Road where the trucks would be braking continuously given the steep grade of the road, and particularly for the Cleanup to AOC LUT Values alternative, where the trucks would be traveling for at least 10 years. In addition, the draft EIS concludes that the noise level will not increase more than 3.5 dBA along all roads where the noise levels would remain below 65dBA, and would increase by no more than 0.6 dBA along roads where baseline noise levels exceed 65 dBA. This conclusion may underestimate the increase in noise levels resulting from the use of Jake brakes on trucks traveling on Woolsey Canyon Road. The impact of potential disturbances by trucks traveling up at night or during early morning hours so as to be ready to commence construction work during daylight hours also is not discussed.
TRAFFIC AND TRANSPORTATION		
S-37	S.10 - Alternatives	The Draft EIS notes that DOE, NASA and Boeing will be simultaneously cleaning up their respective portions of the SSFL and that the three entities have agreed to divide up the maximum number of 96 truck round trips at SSFL each workday. It states: "In this EIS, DOE assumes that it would be allotted 32 truck round trips daily for the first two years of the project and an average of 48 round trips daily thereafter. Even if DOE were allotted as many as 96 round trips daily, the average rate would be 48 round trips, with occasional surges to accommodate periods of higher activity (e.g., to expedite cleanup)." Please clarify whether the average rate of 48 truck round trips daily includes the first two years of the project or applies only to subsequent years.

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146-71 The scope of DOE's current plans and this EIS include 18 DOE-owned buildings, but do not include other man-made features (e.g., roads) in Area IV. DOE will continue to coordinate with Boeing and North American Land Trust on the remaining manmade structures in Area IV. That coordination would include integrating active or passive restoration of roadways with other restoration efforts, as appropriate.

146-72

146-72 Section 4.5.1.4 of this Final EIS includes revised text that incorporates soil cleanup based on ecological risk considerations into the Conservation of Natural Resources Alternative. In some locations within Area IV, the results of the human health and ecological risk assessments determined that soil cleanup was primarily based on ecological considerations.

146-73

146-73 As described in Chapter 4, Section 4.7, this EIS makes use of the time-averaged (over a 24-hour period) noise metric community noise equivalent level (CNEL) in accordance with the *L.A. CEQA Thresholds Guide* (LA 2006). Time-averaged metrics such as CNEL do not communicate the noise level at any particular time. However, they have been shown to be useful as predictors of public reaction to a complex and time-varying noise environment. The metric CNEL is widely used within the State of California to quantify transportation noise levels and a similar time-averaged noise level metric is used in other States for the same purpose. Although calculated CNEL would not exceed thresholds established by the *L.A. CEQA Thresholds Guide*, this does not imply that individual SSFL truck pass-by event noise would not be loud and/or annoying. Chapter 4, Section 4.7 of this EIS describes the measured sound level of pass-by events, the potential maximum number of events per day, and the duration of the noise (i.e., the length of the project). Use of the noise metric CNEL in combination with other descriptive information ensures that the SSFL EIS provides a complete description of the intensity, frequency, and duration of noise. SSFL trucks currently use Jake brakes, technically known as "engine braking", on Woolsey Canyon Road, and their use would continue, to the extent that it is necessary to prevent brakes overheating, under all alternatives. Chapter 3, Section 3.7 and Chapter 4, Section 4.7 of this Final EIS acknowledge ongoing and potential future engine braking noise. Because SSFL truck noise would be expected to be of some concern, DOE has identified two minimization measures in Chapter 6, Table 6-1 that would limit noise impacts. DOE would require trucks to limit the use of engine compression braking on Woolsey Canyon Road and in neighborhoods to the extent practicable, consistent with the safe operation of heavy-duty trucks, and to be equipped with properly operating mufflers. Approximately two-thirds of the roughly 2.4 mile length of Woolsey Canyon Road is not immediately adjacent to residential development. Although SSFL truck drivers would continue to exercise judgment in deciding when engine braking is absolutely

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**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Page No.	Section	Comments
5-78	S.11 - Summary of Potential Environmental Consequences S.11.2 Potential Environmental Consequences of Combined Action Alternatives	The Draft EIS states: "The largest traffic accident risks from transporting all radioactive waste, all nonradioactive waste, and all material (backfill, equipment, and supplies) would occur under the High Impact Combination. Under the truck option, considering shipment of all radioactive and nonradioactive waste and material, the number of traffic-related fatalities is estimated to be about 1 (calculated value of 0.84). Under the truck/rail option, the number of transportation-related fatalities is estimated to be about 3 (calculated value of 2.9)."
4-117	Section 4.8.1.4 Transportation Impacts under All Action Alternative Combinations Section 4.8.1.5 Impact Threshold Analysis Table 4-53	The Draft EIS does not identify a threshold for transportation related fatalities, but any fatality is likely unacceptable. The likelihood of 1 to 3 traffic fatalities identified for the Cleanup to AOC LUT Values alternative (High Impact Combination) stands in stark contrast to the estimated traffic fatalities for the Low Impact Combination (0.25 for truck method, 0.32 for truck/rail), using the Conservation of Natural Resources alternative. The Cleanup to AOC LUT Values alternative provides no appreciable benefit to human health at SSFL, but its transportation related activities will result in more fatalities than the other alternatives. This serious impact should be properly weighed in selecting the preferred alternative.
2-37	2.4 - Additional Soil Remediation Action Alternatives	The Draft EIS states: "The section of roadway nearest SSFL over which all traffic to and from SSFL would pass is a 2.5-mile-long, two-lane road (Woolsey Canyon Road)". The EIS should ensure that the environmental analysis reflects that there are miles of other two-lane roads along the transportation routes to the freeway.
H-47, H- 51	Appendix H Evaluation of Transportation and Transportation Impacts Table H-18 Table H-20	The traffic analysis for the project calculates the capacities for the relevant roadways, including a peak hour factor (K-factor) (Table H-18 Generalized Daily Service Volumes for Urban Freeway Facilities), and appears to evaluate impacts based on whether the percentage increase of average daily traffic and the percent of road capacity. See Appendix H, p. H-51, Table H-20 Percent Increase in Average Daily Traffic in the SSFL Vicinity under Each Action Alternative. The EIS should consider evaluating the traffic impacts based on the transportation methodologies in the jurisdictions where the roadways are located, e.g., Ventura County or City of Los Angeles, including their thresholds for determining significant traffic impacts.
HUMAN HEALTH		
S-97, S-100, S-101	S.12 - Conclusions	Estimated Risk of Alternatives and Comparison to Background Risk: The EIS should consider calculating Incremental risk on a comparison of background to site risk on an individual constituent basis, not by subtracting total background risk from total site risk. Also, any negative values resulting from this calculation for each constituent should be set to 'zero.'

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necessary to maintain safety, it is expected that engine braking along the portion of the road that is adjacent to residences could be minimized without drivers experiencing any substantial fading (i.e., becoming less effective after heavy use) of the service brake system. Properly operating mufflers are extremely important in determining the noise levels generated when engine braking is employed. Although engine braking generates a staccato sound that is still recognizable when muffled, the intensity of the sound is greatly reduced by a properly operating muffler relative to trucks whose mufflers have been removed. This Final EIS models a maximum use scenario in which the largest number of trucks permitted under the Transportation Agreement (i.e., 96 round trips per day) occurs. Days on which the maximum number of trips would occur would be relatively rare. Although noise levels along Woolsey Canyon Road could increase by as much as 3.5 dB from 55.7 (existing) to 59.2 dBA CNEL on a hypothetical day in which the maximum number of truck trips occurs (see Chapter 4, Table 4-43), most days would involve fewer truck trips and lower time-averaged noise levels. Federal Highway Administration-approved algorithms for calculation of CNEL do not account specifically for noise generated by engine braking. However, to exceed the calculated CNEL in noise-sensitive locations on a particular day, drivers would have to frequently employ engine braking along residential stretches of the road (despite being instructed to limit this if possible) and the maximum number of trips per day would need to occur. Because this confluence of factors is unlikely, the calculated CNEL for the hypothetical 96-round trip day listed in Chapter 4, Table 4-43 is expected to be a reasonable estimate of the highest CNEL that would be experienced in noise-sensitive locations along Woolsey Canyon Road.

As described in Chapter 4, Section 4.7.1.2, of this EIS, no truck trips would occur during hours for which a noise penalty would be applied during the calculation of CNEL. In Chapter 4, Section 4.7, this EIS defines those hours as being between 7:00 p.m. and 7:00 a.m. Because all SSFL truck trips, including trips to pre-position trucks for hauling, would occur between 7:00 a.m. and 7:00 p.m., there would not be noise disturbances caused by trucks traveling at night (i.e., after 7:00 p.m.) or in the early morning (i.e., before 7:00 a.m.).

The calculation and interpretation of time-averaged CNEL is discussed in the response to comment 146-74. The response to comment 146-74 also includes discussion of noise impacts and noise minimization measures associated with engine braking (also known as "Jake braking").

As stated in Section S.10, of this EIS, an average rate of 16 heavy-duty truck round trips applies for the duration of remediation activities.

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
4-129	5.4.9 - Human Health	The discussion of receptors in the "No Action" alternative considers the residential receptor under the assumption that there will be a "loss of control" on the land use, e.g., land restrictions preventing residential use, in 100 years. This is an unlikely scenario that should not be considered.
4-132	4.9 - Human Health	The Draft EIS states that Risk Based Screening Levels (RBSLs) and Preliminary Remediation Goals (PRGs) were used to develop slope factors. Suggest restating to indicate that cancer slope factors and non-cancer toxicity values used to develop RBSLs/PRGs are subject to uncertainty.
4-132	4.9 - Human Health 4.9.2—Soil Remediation Alternatives	The text describing Table 4-60 Human Health Impacts under the Soil Remediation Alternatives, refers to EPA RBSLs. This reference should be to EPA Regional Screening Levels ("RSLs").
4-132	Table 4-60	The qualitative discussion of relative human health risks presented in Table 4-60 should include quantitative estimates of risk for reference.
4-133		Please clarify: for the Residential and Recreational receptors, does the term "toxicity impacts" mean "non-cancer hazard indices (HIs)"? We suggest a global revision in this section and the overall document to refer to "non-cancer hazards" rather than "toxicity impacts", or using "non-cancer" instead of "toxic" (e.g., see p. 4-135).
4-133	4.9 - Human Health 4.9.2—Soil Remediation Alternatives	In the discussion comparing residual incremental risk to background conditions, please clarify what background parameter is being referenced (e.g., upper confidence limit (UCL), upper tolerance limit (UTL), upper specification limit (USL), look up table (LUT)).
4-134	Tables 4-60 and 4-61	
4-136		Please refer to Boeing comment above for 5.12 Conclusions, Estimated Risk of Alternatives and Comparison to Background Risk, regarding calculations of incremental risk
	Appendix G – Human Health	The EIS includes two different risk assessment evaluations, which use different procedures/parameters resulting in different estimated risks and hazards for the DOE's risk-based alternatives. Boeing suggests DOE use standard risk assessment procedures for all risk-based evaluations presented in the EIS to provide accurate and comparable estimates of potential human health risk assessment.
	Appendix J – Cost Benefit Analysis	Boeing also suggests that DOE evaluate potential hazards to ecological receptors in Area IV and the NBZ, in accordance with standard risk assessment practice for protection of the environment, and that Appendices G and J be modified to account for these additional evaluations.

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146-76 The estimated numbers of traffic fatalities are based on State-level accident rates and the related miles (or kilometers) travelled. Therefore, they do not represent actual fatalities, but the risk or likelihood of fatalities occurring as a function of the total transportation distance. As indicated in Chapter 4, Table 4-53 of this EIS, the largest risk results from transporting hazardous and nonhazardous wastes from SSFL to out-of-State disposal facilities. These shipments could occur by a combination of truck or truck/rail transport. The differences in the estimated fatalities for truck and truck/rail transport of these wastes are noted in the table notes to Table 4-53. As indicated, the difference in traffic fatalities between the two transport options (truck and truck/rail) is primarily due to transport of nonhazardous waste over a longer distance under the truck/rail option than that under the truck option, for which transport would be to a location within the State of California. As indicated by the commenter, this EIS identifies and provides the various transportation risks associated with each alternative. DOE agrees with the commenter that these risk values are important inputs that should be considered as part of the overall decision-making process.

146-77 Chapter 3, Section 3.8, of the EIS provides a summary of the characteristics of the principal roads in the SSFL vicinity, including those that may be used for transporting waste from SSFL to nearby freeways. This summary includes general descriptions (e.g., the number of lanes, the presence of sharp curves or lack of road shoulders), a qualitative description of the pavement condition, speed limits, and the average daily traffic on the roads. This information was considered as part of the qualitative and quantitative analysis within the EIS of the traffic impacts associated with the EIS alternatives.

146-78 As reported in Chapter 4, Section 4.8.2, and Appendix H, Section H-13, for the final EIS DOE performed a detailed analysis of traffic flow quality for selected SSFL-area intersections and road segments considering DOE traffic associated with remediation activities and operational factors such as control delay, LOS, and V/C ratios. In Chapter 5, Section 5.5.8.2, of the final EIS, DOE performed a similar analysis to analyze cumulative traffic impacts by DOE, NASA, and Boeing. Section 4.8.2, Section H.13, and Section 5.5.8.2 of the Final EIS were revised to document the changes in LOS ratings and V/C ratios that could potentially occur on affected road segments in the SSFL vicinity. The potential changes in V/C ratios were assessed against the thresholds for impact significance as listed in the L.A. CEQA Thresholds Guide (LA 2006).

Keying from the Transportation Feasibility Analysis included as Appendix J to DTSC's draft Program EIR (DTSC 2017b), the detailed analysis was performed using the procedures contained in the Highway Capacity Manual issued by the Transportation Research Board (TRB 2010). The analysis addresses four intersections and four road

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
WASTE MANAGEMENT		
3-96	3.8 - Transportation/Traffic 3.8.3 Non-Local Offsite Transportation to Waste Management Facilities Table 3-19	We suggest adding a column in Table 3-19 Representative Waste Management Facilities, for license-exempt radioactive material (low activity radioactive waste). License-exempt radioactive material is accepted at a number of facilities, including US Ecology, Grandview, Idaho, which is included in this Table as a representative waste disposal facility outside California.
3-123 Table 3-27	3.10 - Waste Management 3.10.3 Facilities for Receipt of Waste Table 3-27	We suggest adding "license-exempt radioactive material" to the categories of waste to Table 3-27 Categories of Solid Waste Expected to be Generated during Area IV Remediation Activities.
3-130	Table 3-31	Please update the description of the Clean Harbors facility in Aragonite, Utah to state that this facility is permitted to accept license-exempt radioactive material, which is also described as low-activity radioactive waste, and naturally occurring radioactive material (NORM).
3-131	Table 3-31	Please update Table 3-31 Candidate Hazardous Waste Facilities, to reflect that the following disposal sites also accept license-exempt radioactive material: Clean Harbors Grassy Mountain, Utah, Clean Harbors Aragonite, Utah, Clean Harbors Dear Trail, Colorado and US Ecology, Richland, Washington (the non-low level radioactive waste (LLRW) facility).
DEMOLITION ACTIVITIES		
S-42 Section S.10.3.1	5.10 - Alternatives 2.5 - Building Demolition Alternatives 2.5.2 - Building Removal Alternative	As the property owner of Area IV, Boeing will work with DOE to further define the scope of proposed demolition activities related to underground utilities, asphalt surfaces, and obsolete roadways.
2-46	6.2 - Potential Mitigation Measures Table 6-1 Measures to Minimize Impacts of Demolition and Remediation Activities	Item 1-1, Aesthetics. As noted above, Boeing will work with DOE to determine which roads will remain in Area IV and not be removed as part of the proposed demolition activities.
S-43	S.10 - Alternatives Section S.10.3.3 Building Removal Alternative	Please clarify if the "main staging area within the north-central portion of Area IV, near Building 4024" refers to the remaining Boeing-owned Building 4005 concrete pad. If this is the case, then DOE will need to find a different location because Boeing plans to remove this feature as part of the Boeing demolition program.

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segments in the SSFL area, including the unsignalized intersection of Woolsey Canyon Road with Valley Circle Boulevard and segments of Woolsey Canyon Road and Valley Circle Boulevard in the vicinity of this intersection. The analysis was performed by comparing the projected traffic levels potentially attributable to DOE activities against baseline conditions in 2018, assuming 16 or as many as 32 daily heavy-duty truck round trips plus worker commutes. For cumulative impacts, DOE assumed 96 heavy-duty truck trips. DOE also analyzed traffic conditions in future years assuming the projected traffic levels attributable to DOE activities were added to future traffic levels in the SSFL area assuming a 1 percent traffic growth rate until the year 2032. This 1 percent traffic growth rate is independent of traffic attributable to DOE activities. The assumptions of 2018 baseline conditions, a 1 percent traffic growth rate, and a cutoff of the analysis in 2032 are the same as those in DTSC's 2017 Transportation Feasibility Analysis (Appendix J to DTSC 2017b).

The results for traffic potentially attributable to DOE activities and for cumulative traffic conditions represent worst-case scenarios for each of the four evaluated routes between SSFL and major highways. This is because 100 percent of SSFL traffic was assumed to use a single route. In reality, other than Woolsey Canyon Road, traffic volumes on roads in the SSFL area could be reduced by using a combination of routes which would diffuse traffic impacts over the road system. In addition, potential congestion at the intersection of Valley Circle Boulevard and Woolsey Canyon Road may be mitigated through installation of traffic signals.

146-79 DOE has shown total risk (including background) in the risk tables and has separately shown the background risk. The Incremental Risk is calculated as the difference between those two. Calculating incremental risk on a comparison of background to site risk on an individual constituent basis and summing for the total, as suggested by the commenter, provides the same result as subtracting total background risk from total site risk as the methodology used in this EIS unless negative incremental values are set to zero. For the Final EIS, The screening of contaminants of potential concern against background has now been performed for each subarea in the Final EIS. This resulted in the removal of most of the contaminants with negative incremental differences between site and background values.

146-80 DOE agrees that the Boeing Grant Deeds of Conservation Easement and Agreements (conservation easements) with North American Land Trust and recorded with Ventura County in 2017 (Ventura County 2017a, 2017b) provides administrative controls making this an unlikely scenario. Regardless, a suburban resident (without garden) scenario has been retained to provide a conservative analysis for comparison with the open space scenario.

Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Page No.	Section	Comments
2-43	2.5 - Building Demolition Alternatives 2.5.2 Building Removal Alternative	CEQA review may or may not be required for Boeing's planned removal of remaining buildings (four structures) in Area IV. Please revise the fifth sentence of the fourth paragraph to state that the timing of Boeing's demolition activities is currently unknown.
2-78 2-79 2-103	2.8 - Summary of Potential Environmental Consequences 4.5 - Biological Resources	We suggest revising the discussion of the potential adverse impacts on the Santa Susana Tarplant to note that such impacts could occur if there are established individuals within asphalt parking lots (e.g., growing in cracks) and in or on on gunitite basins and slopes at the time of demolition, in addition to being established next to buildings. As a general comment, it appears that asphalt removal may not have been fully evaluated as part of demolition activities. Consider additional evaluation of the potential for areas where paving has been removed as additional habitat for vegetation.
4-64	Section 4.5.2 Building Demolition Alternatives	
5-5	5.5 - Results of the Cumulative Impacts Analysis	
2-103	2.8 - Summary of Potential Environmental Consequences	We suggest revising the following sentence to include the bolded language: "Native species of birds and bats that roost or nest in the buildings, if present , would lose these sites when the buildings are removed."
3-59 4-67	3.5 - Biological Resources Section 3.5.3.4 Disturbed Sites Habitat 4.5 - Biological Resources	Consider identifying appropriate deterrence measures during demolition activities, given the finding that existing buildings provide space for roosting or nesting for barn and cliff swallows, owls, and bats, and incidental observations of nesting by native bird species such as the American kestrel, house finches, and most likely raptors.
SCOPE OF CLEANUP		
2-19 Figure 2-1	2.3 - Initial Soil Remediation Alternatives	The 2010 AOC contemplates the removal of contaminated materials emanating from Area IV or the Northern Buffer Zone (NBZ), including those transported along the drainages. The Draft EIS should include these soil volumes in its estimates. Very little contamination contiguous to and emanating from Area IV is shown on Figure 2-1, particularly related to migration onto Area III. Several areas have soil sample results with radiological and/or chemical exceedances of risk-based screening levels and these areas should be addressed in DOE's soil volume estimates. These areas include: Silvernale pond and the drainage leading to and from Silvernale pond; drainages leaving Area IV south, west, and north of the Systems Test Laboratory IV (STL-IV) site; and drainages leaving Area IV east and west of the Environmental Effects Laboratory (EEL).

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In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easements (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

146-81 Uncertainty in the assumptions is discussed in Chapter 4, Section 4.9.1.2.3 in this Final EIS. The language was clarified to state that there is uncertainty in both cancer slope factors and non-cancer toxicity values.

146-82 The text in this Final EIS was corrected.

146-83 In response to comments, DOE has added a quantitative evaluation of onsite impacts for all alternatives. The results of the analyses are included in Chapter 4, Section 4.9 of this Final EIS.

146-84 Yes, the term toxicity impacts was used to mean non-cancer impacts as measured by the hazard indices. This clarification has been added in this Final EIS.

146-85 As stated in Chapter 4, Section 4.9.2 and in Appendix G, Section G.2.2.2 of the draft EIS, a UCL95 value was used for subtraction of background. However, for the final EIS, no background subtraction was performed. Background UCL95 impacts are presented for both total background and COC contributions to background.

146-86 The methods used in Appendix G and Appendix K of the Draft EIS differed due to the treatment of sample data for the subareas and exposure units, but both were judged to be highly conservative. Using the full data sets, screening of contaminants of potential concern against background has been performed for each subarea and exposure unit for use in both sections of this Final EIS. Also, UCL95 values have now been calculated for both subareas and exposure units using the actual measured values for radionuclides and using the Kaplan Meyer method for treatment of non-detects for chemicals in this Final EIS.

**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Page No.	Section	Comments
3-60 and 3-61	3.5 - Biological Resources Figure 3-21 Wetlands, Vernal Pools, Ponds and Jurisdictional Waters of the U.S.	Figure 3-21 is described as depicts some, but not all features in Area III, e.g., Silvernale Pond in Area III, but not the drainage leading into the pond. This Figure is described as showing "wetlands, vernal pools, jurisdictional waters, ponds, and NPDES outfalls in Area IV and the NBZ, or in other SSFL areas but important to the proposed activities." While features outside Area IV and the NBZ have not been formally delineated, since Silvernale Pond is depicted on this Figure, the drainage leading to Silvernale Pond should also be shown, as this drainage and Silvernale Pond are affected by the proposed activities. Drainages that extend beyond the borders of Area IV and the NBZ should also be shown on this Figure.
4-52 Section 4.5	4.5 - Biological Resources	The Draft EIS states: " The Region of Influence (ROI) identified for biological resources is described as encompassing areas that could be directly or indirectly impacted by remediation activities, including Area IV, the NBZ, and downslope areas that could be affected by runoff by Area IV or the NBZ, or by accelerated erosion or sedimentation." This definition excludes those downslope areas within Area III, such as the drainage that leads to Silvernale Pond. The ROI should be expanded to include these additional areas with contiguous contamination emanating from Area IV.
4-59	4.5 - Biological Resources Figure 4-6 Wetlands and Waters of the U.S. under the Cleanup AOC LUT Values Alternative	Figure 4-6 is described in the Draft EIS as depicting "areas projected for remediation under the Cleanup to AOC LUT Values Alternative, as well as the locations of aquatic features, including wetlands, potential jurisdictional Waters of the U.S., and other drainage features." This map should be revised to depict those contiguous areas outside of Area IV that have contamination emanating from Area IV.
REGULATIONS AND OTHER REQUIREMENTS		
	8.0 – Laws, Regulations and Other Requirements	DOE's access to Area IV and the Northern Buffer Zone to conduct environmental investigation, remediation, building decontamination, decommissioning, and demolition activities is governed by the terms of the Access Agreement between DOE and Boeing dated December 20, 2013. Please include a reference to this document in the EIS.
8-24	8.2 - Applicable Permits Table 8-3 Potentially Required Permits or Approvals for Implementation of Alternatives in this EIS	We suggest adding the following permits to Table 8-3 Potentially Required Permits or Approvals for Implementation of Alternatives in this EIS: -U. S. Army Corp of Engineers—Clean Water Act Section 404 permit -California Department of Fish and Wildlife—Streambed Alteration Agreement -Los Angeles Regional Quality Control Board—Section 401 Water Quality Certification -Ventura County—Oak Tree Permit

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146-87 Please refer to DOE's responses to comment 146-9 and 146-72.

146-88 The cited table was not revised in accordance with the recommendation, because low-activity LLW (also called exempt waste), which may be disposed of under NRC or Agreement State regulation at facilities other than those licensed under 10 CFR Part 61 or compatible Agreement State regulation, is a subset of the general definition of LLW which is provided in the textbox in Chapter 3, Section 3.10. Statements in Table 3-30 of the Final EIS (Table 3-31 of the Draft EIS) regarding acceptance of waste at the identified Clean Harbors sites are consistent with information provided by Clean Harbors personnel.

The Aragonite facility is an incinerator rather than a landfill. As stated in Table 3-30, the Clean Harbors Buttonwillow, California, landfill and Dear Trail, Colorado, landfill can accept NORM (naturally-occurring radioactive material) and/or TENORM (technology enhanced naturally-occurring radioactive material) waste. The U.S. Ecology hazardous waste facility at Richland, WA, is not specifically identified in Table 3-31. A footnote was added to the discussion in Chapter 3, Section 3.10.3, to note that some hazardous or nonhazardous facilities may accept NORM, TENORM, or low-activity radioactive waste (also called exempt waste) pursuant to 10 CFR 20.2002 or a compatible Agreement State regulation.

146-89 The scope of DOE's demolition activities as described in this EIS is the 18 buildings in Area IV owned by DOE and adjacent parking lots. DOE will continue to coordinate with Boeing on the remaining manmade structures in Area IV.

146-90 The staging area referred to is adjacent to Building 4024; it is across B Street from where the Building 4005 concrete pad is located. This Final EIS was revised to clarify that the area is adjacent to Building 4024.

146-91 The text in this Final EIS was revised as suggested.

146-92 The text in this Final EIS was revised accordingly.

146-93 Please refer to DOE's response to comment 146-90. Any areas remediated by DOE would undergo restoration as described in Chapter 4, Section 4.5 of this EIS; DOE does not believe additional analysis of these areas would meaningfully change the results of this EIS.

146-94 The text in this Final EIS was revised accordingly.

**Commenter No. 146 (cont'd): Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**

Page No.	Section	Comments
GLOBAL COMMENTS AND CORRECTIONS		
		CDFW is the California Department of Fish and Wildlife.
		Please change all references in the Draft EIS to "suburban resident" to "hypothetical future resident."
		"Roca Road" should be "Coca Road."
		The Area I Road is not located in the Sothern Undeveloped Land.

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- 146-95 Appropriate deterrence measures for roosting or nesting bats, and birds such as barn and cliff swallows, house finches, and raptors such as American kestrels and owls, have been incorporated.
- 146-96 Please refer to DOE's response to comment 146-13.
- 146-97 Figure 3-21 of the Draft EIS, Figure 3-23 of this Final EIS, was updated to reflect the most current data. The intent of the figure is to show features within Area IV and the NBZ, areas specifically identified as the responsibility of DOE.
- 146-98 The Access Agreement between DOE and Boeing, dated December 20, 2013, was added to Chapter 8, Table 8-3, of this Final EIS.
- 146-99 These permits and certifications were added to Chapter 8, Section 8.2 and Table 8-3 in this Final EIS.
- 146-100 The text in this Final EIS was revised accordingly.
- 146-101 The commenter's preference for a different designation for a future resident at SSFL is noted. However, the current terminology will be retained to remain consistent with terminology used in other site documents.
- 146-102 The text in this Final EIS was revised accordingly.

**Commenter No. 147: Travis Longcore, Catherine Rich,
Margot Griswold, Los Angeles Audubon Society**



P.O. Box 931057
Los Angeles, California 90093-1057

March 28, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Ms. Jennings:

Los Angeles Audubon Society has been a voice for birds and conservation in Los Angeles for 107 years. Our mission is to promote the study and protection of birds, other wildlife, and their habitats. We have over 3,500 members and supporters, most of whom live in Los Angeles. Our founding principles include a commitment to fostering "a proper conservation of our native birds, other animals, wild flowers, trees, shrubs, soil and water." It is in this context that we offer comments on the proposed plans for remediation of the significant contamination at Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory.

As is established in the Draft Environmental Impact Statement (DEIS), the Santa Susana Field Laboratory is the site of both radioactive and chemical contamination as a result of a long history of industrial and governmental use. State and federal agencies, including the Department of Energy (DOE), committed in 2010 to a cleanup of the site to background levels of contamination. Astoundingly, all options included in the DEIS would breach that agreement and not achieve the standard to which the DOE committed. Instead, the options considered would leave up to 39%, 91%, or 99% of the contamination in place at the site.

Los Angeles Audubon Society has previously stated its opposition to an approach that does not clean up this contaminated site as agreed upon:

Los Angeles Audubon opposes this approach and endorses cleanup to the standards agreed upon in 2010. It would be unacceptable to leave radioactive and chemical contamination on a site that might be used for birding and other recreation. We recognize that a cleanup to background standards would itself result in environmental impacts, but once completed, the site can be actively restored and even without active

Los Angeles Audubon Society P.O. Box 931057 Los Angeles, California 90093-1057
Established 1910 www.losangelesaudubon.org

147-1

147-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. Under NEPA, DOE has an obligation to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated do leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

**Commenter No. 147 (cont'd): Travis Longcore, Catherine Rich,
Margot Griswold, Los Angeles Audubon Society**

restoration the site would continue to function as a crucial linkage for wildlife. Santa Susana Field Laboratory presents an extraordinary circumstance; the contamination at the site is an environmental disaster that must be remedied before moving forward with any other use (Los Angeles Audubon Society Board of Directors, September 25, 2016).

We have reviewed the elements of the DEIS and find that it is conceptually flawed in several ways.

First, the only biological impacts (to non-human species) that the DEIS evaluates are those that would result from the remediation actions themselves. The DEIS does not provide an assessment of the impacts on wildlife of the contamination that would be left on site.

Second, the DEIS does not make use of ecological Risk-Based Screening Levels (RBSLs) that establish harm from contaminants to species other than humans. Ecological RBSLs are an essential part of a complete analysis. Ecological RBSLs have been calculated for the site, as defined in the Standardized Risk Assessment Methodology approved by the Department of Toxic Substances Control (DTSC), but they have not been used in the DEIS. We note that the cleanup standards now proposed by the DOE would allow many of the contaminants at SSFL to remain at levels that are far higher than the established ecological RBSLs. Specifically, the DOE proposes to leave contaminants in place at SSFL at levels hundreds or thousands of times higher than deemed an acceptable risk for wildlife.

Third, the exposure pathways used for the assessment do not include indirect exposures, e.g., from consuming food from a backyard garden (p. S-31, footnote 22). As a result, the proposed allowable contamination levels are not those established for the specified land use (suburban residential) but are several orders of magnitude higher. It is disingenuous for the DEIS to purport to clean to suburban residential standards and then arbitrarily ignore a key pathway of exposure in suburban residential settings, resulting in leaving behind concentrations of contaminants thousands of times higher than the default Environmental Protection Agency (EPA) and DTSC suburban residential standards.

Fourth, under EPA guidance, exposure calculations should not be based on an approach that averages the amount of a contaminant over an area unless the way that receptors will be exposed is truly random. The EPA has indicated that residential scenarios, among others, are unlikely to be random. Yet, the DEIS averages exposure estimates at large spatial blocks (100 acres) even though neither people nor wildlife would use these areas in random spatial patterns. The implication is that the average exposure can be made to look smaller if a small, concentrated location of contamination is averaged in with large surrounding areas that have lower contamination. But what if a future trail or wildlife observation area were to be located by the concentrated contamination site? Then exposures would be much higher than predicted by the improper approach used in the DEIS.

Fifth, the DEIS does not consider the off-site impacts on people or other species of the contamination that would remain under various scenarios. As is evident from the history of water quality violations from runoff originating on the project site, contaminants are moved off site through normal hydrogeomorphological and biological processes. Movement of these

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147-2 The EIS was revised to reflect cleanup levels for the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative that are based on human health risk as well as ecological risk. The results of this analysis are presented in Chapter 4, Section 4.5. Inclusion of this analysis provides for a more quantitatively address ecological risk receptors under the alternatives.

147-3 As explained in the Draft EIS, DOE used suburban residential risk-based screening levels (RBSLs) or risk slope factors based on the direct exposure pathways and without the indirect garden pathway to evaluate potential impacts to an onsite receptor. DOE chose to analyze the residential scenario because at the time of writing the Draft EIS, the land owner, Boeing had stated that the residential scenario was the basis for its risk analyses

Since publication of the Draft EIS, The Boeing Company (Boeing) and North American Land Trust in 2017 recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. Risk assessments are based on the most-likely future land use scenario. Residential development involving backyard gardens is not being considered as a future scenario for Area IV.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

**Commenter No. 147 (cont'd): Travis Longcore, Catherine Rich,
Margot Griswold, Los Angeles Audubon Society**


contaminants over time would likely result in impacts to sensitive receptors off site and these impacts should be evaluated in the DEIS.

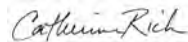
Los Angeles Audubon Society recognizes that implementing the full cleanup that was promised by the DOE would have temporary impacts on the environment, but shares the view expressed by the U.S. Fish and Wildlife Service in its previous Section 7 consultation regarding this site that those impacts are acceptable in the interest of properly remediating the land. The potential impacts of a full remediation to background levels are the consequence of past industrial actions and not a new impact to be avoided. If anything, the impacts of the cleanup on biological resources should be mitigated by the polluters through additional compensatory mitigation above and beyond the restoration of the site following the cleanup.


Finally, we object to the DOE calling the project alternative that would leave the most contamination on the site the "Conservation of Natural Resources" alternative. To the contrary, this framing hides that the landowners have been working assiduously to cultivate members of the conservation community to carry their message for them, promising a natural open space if they are allowed to avoid their cleanup responsibilities. As a conservation organization, we reject the notion that this alternative conserves natural resources, especially given that the DEIS does not even use the ecological RBLSs, which would certainly not allow leaving up to 99% of the contamination on the site.

We urge that the DEIS be revised so that all options considered are fully consistent with the legally binding cleanup agreement entered into in 2010, which is not the case in the current document.

Sincerely,


Travis Longcore, Ph.D.
Conservation Chair


Catherine Rich, J.D., M.A.
Conservation Co-Chair


Margot Griswold, Ph.D.
President

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147-4 While cleanup may be performed on a point-by-point basis, assessments are intended to model more real-world exposure situations. When a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989) prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and suggests the use of a maximum value only as a screening tool as follows:

“Still, in other instances, the assessor may wish to use the maximum concentration from a medium as the exposure concentration for a given pathway as a screening approach to place an upper bound on exposure. In these cases it is important to remember that if a screening level approach suggests a potential health concern, the estimates of exposure should be modified to reflect more probable exposure conditions. In those instances where it is appropriate to group sampling data from a particular medium, calculate for each exposure medium and each chemical the 95 percent upper confidence limit on the arithmetic average chemical concentration.”

Therefore, DOE has appropriately used a UCL95 (or a median when warranted) for calculating risk and toxicity impacts.

The risk assessments conducted for cost benefit analysis for each alternative documented in Appendix K of the Draft EIS were conducted based on a 10,000 square meter (approximately 2.5 acres) exposure units for specific high-impact areas. The size of 2.5 acres for exposure units for averaging data was considered appropriate based on the future use of the site as open space. In addition, for the risk-based alternatives, areas with individual results greater than 10 times the selected remediation level will be targeted for remediation as hot spots.

147-5 All of the soil remediation action alternatives addressed in the EIS would involve removal of contaminated soil and is protective of the health and safety of the public and the environment. Exceeding a look-table value for a chemical or radionuclide does not mean that the chemical or radionuclide is present at dangerous levels. This includes potential runoff following soil remediation.

In response to comments on the Draft EIS, DOE has added an offsite human health impact assessment by modeling of potential releases of wind-blown dust to an offsite receptor during and after remediation for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS. Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of any significant concentrations of Area IV contamination leaving SSFL. The commenter is referred

**Commenter No. 147 (cont'd): Travis Longcore, Catherine Rich,
Margot Griswold, Los Angeles Audubon Society**

to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

- 147-6 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD regarding the inapplicability of the previous Biological Opinion (EPA 2010a) to the proposed remediation of Area IV and the NBZ. DOE would implement compensatory measures for Area IV and the NBZ consistent with the USFWS Biological Opinion (see Appendix J) for remediation of SSFL and in compliance with Ventura County Tree Protection Regulations in the Non-Coastal Zoning Ordinance. Proposed methods to resolve adverse effects through avoiding, minimizing or mitigating them, are described in Chapter 6.
- 147-7 The Conservation of Natural Resources Alternative does not leave "most" of the contamination at Area IV. The alternative focuses on where contamination exists and targets those locations for cleanup. Following soil cleanup, Area IV will be safe for use by recreationists and ecological receptors. This alternative "conserves" natural resources because it does not unnecessarily damage or destroy natural areas containing little or no contamination.

Commenter No. 148: Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition



April 13, 2017

Ms. Stephanie Jennings
 NEPA Document Manager SSFL Area IV EIS
 U.S. Department of Energy
 4100 Guardian Street, Suite 160
 Simi Valley, CA 93063

Dear Ms. Jennings:

The Rocketdyne Cleanup Coalition (RCC) is pleased to submit comments on the Department of Energy's (DOE) Draft Environmental Impact Statement (DEIS) for the cleanup of the Santa Susana Field Laboratory (SSFL).

RCC is a community-based alliance that was formed in 1989 to prevent the re-licensing of nuclear work at Rocketdyne (now SSFL). Once we learned about the partial nuclear meltdown and other accidents that were long kept from the public, we were concerned that continued nuclear work at the site would bring additional harm to the health of our communities. Together with other key people and organizations, we helped bring an end to nuclear activities at SSFL.

Many of us live right below the site, so we turned our focus to making sure that all of SSFL's nuclear and chemical contamination was cleaned up. After two decades of fighting, in 2010 we thought we might finally have a full cleanup when both NASA and the DOE signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substance Control (DTSC) which required a cleanup to background levels of contamination. It seemed almost too good to be true, and sure enough, it wasn't long until DOE made it clear that it wanted out of the agreement.

In 2014, weeks after telling the community at an SSFL Work Group meeting that DOE was committed to upholding the AOC, DOE issued a public scoping notice for its EIS that violated the AOC by considering "on-site containment" and "on-site disposal" of contaminants which are barred in the AOC. At the time, DOE also told the community that its draft EIS would be done in 2014 and finalized in 2015. But DOE delayed publishing the DEIS until January 2017, which we suspect it because DOE knew that key elected officials who supported the AOC like Senator Barbara Boxer would no longer be in office. The AOC also stipulates that the cleanup was to be completed in 2017, but of course it hasn't even begun.

It is therefore unfortunately not a surprise to us that DOE's DEIS proposes to break the legally binding commitments of the AOC and leave large amounts of radioactive and toxic chemical contamination in place, where it can continue to migrate and harm our community. DOE proposes four alternatives that would leave up to 39%, 91%, 99% or 100% of the contamination not cleaned up.

148-1

148-1 Please see Section 2.1, "Preferences for Cleanup," of this CRD. There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. As the commenter notes, in 2010, DOE signed the AOC. However, under NEPA, DOE has a legal obligation to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. As described in Chapter 2, Section 2.3.3.1, of this EIS, there are issues with implementing the technical elements of the AOC. These issues, the adverse effects of a massive excavation of Area IV, stakeholder input, and DOE's responsibility under NEPA regulations to "identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects" resulted in DOE identifying and evaluating additional alternatives that met its purpose and need (Please see Chapter 1, Section 1.1.) It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Sections 2.2, "Compliance with the 2010 Administrative Order on Consent," and 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated would be protective of the health and safety of the public and the environment. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

On top of proposing to violate the AOC and leave SSFL contaminated, DOE's DEIS omits critical information that the public needs to know in order to make informed comments. DOE omits the accidents and sloppy practices that lead to SSFL being so badly contaminated. Over the decades, SSFL housed 10 nuclear reactors, a "Hot Lab" to cut up irradiated reactor fuel from around the country, plutonium and uranium-carbide fuel fabrication facilities, and a sodium burn pit in which open-air burning of contaminated reactor components took place. One of the reactors, the Sodium Reactor Experiment, experienced a partial nuclear meltdown in 1959. Two other reactors experienced accidents with fuel damage as well. These activities left a legacy of contamination from dangerous radionuclides and toxic chemicals, which can cause cancer and other illnesses. Federal studies indicate increased cancers among workers and in the offsite population.

We are particularly saddened to see what appears to be a new pediatric cancer cluster near SSFL. It was only a few years ago that mothers of children with retinoblastoma were meeting each other at Children's Hospital and discovering that they lived near each other, and near SSFL. Now more families are discovering that their child's rare cancers are not so rare in the neighborhoods near SSFL. Of course we cannot say definitely that these cancers are related to SSFL contamination but we do know that the contaminants at SSFL are capable of causing these kinds of cancers. If SSFL was cleaned up years ago as it should have been, at the very least these families would not have to worry about SSFL on top of everything else they have to endure.

But DOE is now proposing that most of the contamination not be cleaned up, meaning families will continue to be at risk. That is unconscionable.

DOE claims that the National Environmental Policy Act (NEPA) requires it to do an EIS that examines alternative cleanup plans that would breach the AOC it signed, but that is not true. In 2010, both NASA and DOE signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substances Control (DTSC) to clean up SSFL to background levels of contamination. In 2011, NASA proposed an EIS that would look at other options, claiming – as DOE is doing now – that the National Environmental Protection Act (NEPA) required it to look at alternatives that breached the AOC. But the Council for Environmental Quality disagreed, directing that since NASA must comply with the AOC, it need not consider alternatives that breach it, just as DOE must comply now. DTSC also directed NASA that its EIS was to be limited to looking at various ways to achieve the required cleanup to background, not whether or not to fulfill the requirements of the AOC.

In 2012, DOE understood this requirement. Indeed, it issued a notice "Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement" that acknowledged it was obligated to carry out the AOC requirement to cleanup to background, and committed that the EIS would be limited to alternative ways to achieve that cleanup standard – not whether to live up to the AOC requirements. But now, DOE has broken that promise. Now DOE has alternatives that could leave almost all of the contamination on site, where it can continue to run down the hill into our communities year after year.

DOE, as the polluter, doesn't have the authority to decide how much of the mess that it made is going to get cleaned up. Even if there were no AOC, the decision rests with DTSC for the chemicals under the Resource Conservation and Recovery Act. For radioactivity, DTSC has authority per the AOC. In 2012, DOE recognized that DTSC was the regulator and decision-maker about how much contamination it must clean up. But now in DOE's DEIS, DTSC is barely mentioned. In fact, DOE's DEIS portrays the decisions as to how much of contamination gets cleaned up as being up to DOE, when clearly, it is not. The DTSC will be preparing its own Environmental Impact Report for the entire SSFL

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- 148-2 Chapter 1, Section 1.3 of this Final EIS discusses the history of activities at SSFL. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). Most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE's current focus is to complete the cleanup of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussions of concerns about offsite impacts.
- 148-3 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children in Los Angeles and Ventura Counties (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. Section 3.9.5 also summarizes the published health studies for workers at SSFL, as well as cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.
- 148-4 DOE has a legal obligation in an EIS to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. The Draft EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, the Draft EIS also analyzed alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

site later this year, which will also be open to public comment. And we are prepared to demand that DTSC use its authority to enforce the AOC and ensure that SSFL is fully cleaned up.

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DOE claims that a protective cleanup poses undue harm to the environment, but that the contamination poses little risk, framing the entire cleanup in terms of trucks instead of how much contamination will be left behind. SSFL contamination poses a very significant risk to public health in all DOE's options - risks that far outweigh environmental concerns, which can be mitigated. Most of the cleanup is occurring in areas that are already disturbed by DOE activities. DOE was not concerned about the environment when it was polluting the land so badly, nor about trucks when they were driving up to SSFL every day bringing hazardous loads of spent commercial nuclear fuel from around the country.

148-7

DOE is hyping the issue of trucks as a way to scare the community into opposing the cleanup agreement. DOE failed to consider routes for the transportation of contaminated soil that avoid neighborhoods. DOE did not examine alternative truck routes as well as the railroad station less than a quarter mile north of the site that is able to ship out contaminated soil. The rail spurs are accessible by routes that do not pass by any residences and less than a mile away from DOE's Simi Valley office. But DOE only considered trucking the contaminated soil to a railroad line 60 miles away. DOE also didn't consider covered conveyor systems that could reduce trucks dramatically.

148-8

DOE's first proposed cleanup option claims to use the AOC's lookup tables, but proposes exempting nearly half a million cubic yards of contaminated soil and to leave it in place instead, which violates the AOC. DOE states that this option entails cleaning up 933,000 cubic yards, but the DEIS states that the total soil contaminated is 1,413,000 cubic yards, an astronomically larger number. DOE justifies the exemption on its hope that the contamination might lessen on its own 70 years from now and on potential exemptions that in fact violate the AOC's very limited exemptions.

148-9

Indeed, the DOE states numerous times in the DEIS their desire to defer to "natural attenuation" which they say would take at least 70 years. This is concerning, because it would mean that contamination would have remained on site for more than a century from the time it was created, constantly leaking off site, infiltrating the soil, water and potentially people in the community below. Leaving the site contaminated for most of the rest of the century also raises serious questions about future use, given talk of converting the remediated site into a park, which couldn't happen with the left-in-place pollution.

148-10

148-11

The excuse of a biological exemption doesn't hold up either. The AOC exemption requires a Biological Opinion from the U.S. Fish and Wildlife Service stating that no other reasonable and prudent measures exist to achieve the desired cleanup. There has not been such a Biological Opinion issued, and if there had been, mitigation measures are to be taken, not avoiding the cleanup altogether. The U.S. Fish and Wildlife Service did issue a Biological Opinion several years ago to EPA for its preparatory work for the cleanup, concluding mitigation measures could be done and that the cleanup was critical for protecting biological resources. The only two plants actually found in Area IV and the NBZ are Braunton's milk-vech which is federally listed as endangered, and the Santa Susana tarplant, which is state listed as rare. DOE's DEIS claims that there are 12 additional plant species that may exempt them from remediation, but of these 12 plants, none have actually been observed on the site, and many of them are neither federally listed as endangered nor threatened. In terms of animals, there are none that are both federally listed and have been found on the site. Of all the 7 animals mentioned on the DOE DEIS, 5 have a "low" potential of occurrence and 2 are "not expected" to occur on the site at all.

148-12

DOE's argument that there would be a more negative impact to the environment by cleaning up the toxic mess than leaving it there to continue to damage the health of local residents, plants, and animals is preposterous. The environment would not be harmed by cleaning it up—it was damaged the moment

148-13

levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for further discussion of this topic.

148-5 DOE recognizes DTSC's authority over cleanup of SSFL under the 2010 AOC and under California hazardous waste management programs including RCRA. Please see Final EIS Chapter 8, Section 8.1.9 for discussions of the regulations and orders that promulgate this authority. In addition, Chapter 1, Section 1.9.2 of this Final EIS discusses DTSC's process to regulate cleanup of the entire SSFL via CEQA and preparation of a program environmental impact report (EIR). The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* issued by DTSC in 2017 (DTSC 2017). The Area IV and NBZ site cleanup activities covered by this Final EIS would begin following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. DTSC does not have authority over demolition of non-regulated buildings but will perform oversight of debris disposal relative to the appropriate facility.

148-6 Thank you for your comment. It has been included in the Administrative Record for the EIS.

148-7 The analyses for the Conservation of Natural Resources Alternative in the EIS show that soil cleanup performed in the manner that EPA does under CERCLA and DTSC throughout California would be protective of human health and the environment. A soil cleanup that would first remove soil posing a risk to human health and the environment but leave soil with lower concentrations would protect the environment by not disturbing soil that poses a minimum risk. The purpose of the EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Consistent with NEPA requirements, the potential impacts that implementing each alternative could have on several resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and traffic, are evaluated.

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

DOE contaminated it. The best hope for the natural resources onsite is to leave the land as close to its original state as possible (cleaning up to background levels of contamination), so that it may heal and restore itself without toxic chemicals and radionuclides present in the soil and groundwater. In order to protect the biological resources of SSFL, DOE must complete a full clean up as specified in the AOC.

148-13
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DOE is also creating cultural exemptions as a way to get out of cleaning up certain portions of the site, but there are no registered Cultural Artifacts in Area IV and the NBZ that would exempt DOE from cleaning up.

148-14

DOE claims that it's second option, the "Revised AOC LUT values" are suburban residential standards, but it has manipulated that standard to be 100 – 1,000 times more relaxed than the true EPA suburban residential standard. DOE achieved this by excluding "indirect" pathways of exposure, such as ingestion of produce from a home garden, thus also eliminating 99.99% of the total dose and drastically lowering the associated risk. Yet even without the AOC requirement for cleanup to background, a suburban residential standard would be insufficient—longstanding EPA guidance says that DOE should rely on local zoning for setting the cleanup standard, which at SSFL is agricultural which would be sufficiently protective. DOE ignores that requirement. If suburban residential is to be used, as DOE claims, it needs to be the true standard, not one hundreds of times weaker.

148-15

It is important for us to emphasize that the end of the site is irrelevant to the cleanup. Boeing has said it will restrict its property for open space, but recreational cleanup standards and the one that DOE proposes its second alternative leave tremendous contamination on site that will continue to migrate and impact us. Others may visit or hike in the area once in a while, but we live near the site 24-7. The site has to be fully cleaned up to ensure that we and our neighbors are protected.

148-16

DOE's third option is to clean up to a standard of 25 millirem per year, the equivalent of a medically unnecessary chest X-ray every month of one's life! This also violates the 1995 DOE-EPA Joint Policy that all DOE sites must be cleaned up consistent with EPA Superfund guidance, which has declared 25 millirem to be non-protective. Because this option also involves averaging contaminated areas with cleaner ones, rather than cleaning up anything over the cleanup level (which is also barred by EPA guidance), the exposure will be closer to the equivalent of hundreds of unnecessary chest X-rays every month of your life. That is simply unacceptable!

148-17

DOE's DEIS repeatedly states that it does not have a preference of alternatives, but it clearly wants to break the AOC and leave SSFL contaminated, regardless of what impact that has on us and surrounding communities. DOE has made its bias clear through its efforts to impede participation from members of the public who want the AOC cleanup agreement upheld, while contributing significant financial resources to a group that opposes it. The DOE admits that it gave the SSFL CAG \$34,100 as part of a three year renewable grant, but has refused to release the grant application, agreement, or any terms of the grant.

148-18

DOE has also refused to provide an email address to which DEIS comments may be sent, and even went so far as to delete the email address they had generated specifically for the DEIS, and presented as a means to contact the DOE on the matter. DOE also refused to allow community members to present slides as part of their testimony, claiming that such a request contradicted the hearing notice. The public hearing announcement does not prohibit members of the public from presenting slides.

148-19

Rocketdyne Cleanup Coalitions asks that DOE keep its commitment to clean up all of the contamination at SSFL by upholding the AOC to the letter. We will be the ones most impacted if DOE breaks the

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148-8 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare the community out of supporting cleanup, but it is true that the more soil that is removed to clean up the site, the larger the transportation effort (i.e., a larger number of truck trips) required. The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. Results of the analyses allow a comparison of potential impacts, in this case transportation impacts, and tradeoffs between the alternatives. In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks under all action alternatives would be small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

148-9 Under the soil cleanup to the AOC LUT Alternative, the 735,000 cubic yards difference between the soil to be removed and the total soil contaminated is based on areas exempt to protect cultural and biological resources (115,000 cubic yards) and areas proposed for monitored natural attenuation of low concentrations of total petroleum hydrocarbons (TPHs) (620,000 cubic yards). See Chapter 2, Section 2.3.2 of this Final EIS for additional information. While DOE acknowledges that DTSC would have to approve the biological and cultural exemptions, DOE will not violate Federal, State, or local laws during the conduct of the Area IV soil cleanup. DOE also acknowledges that any onsite treatment method, such as Monitored Natural Attenuation (MNA) for concentrations of TPH that do not threaten groundwater quality, would have to be approved first by the DTSC before MNA would be used. For additional discussion of this issue, refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," and Section 2.4. "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD.

148-10 The 2010 AOC allows for onsite treatment of soils and natural attenuation was included as a treatment option in the EIS at the suggestion of DTSC staff. As stated in the Final EIS Chapter 2, Section 2.3.2, monitored natural attenuation would be applied to soil with TPH (620,000 cubic yards) where they are the only chemical exceeding LUT values and do not threaten groundwater quality. See Appendix D of this Final EIS for additional information. The soil referenced to take up to 70 years for the contaminant to degrade contains complex polycyclic aromatic hydrocarbons (PAH),

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

agreement and leaves toxic contamination on site, and therefore urge DOE to do what is said it would do and clean up all detectable contamination at SSFL.

Sincerely,

Marie Mason and Dawn Kowalski
 Co-Founders, Rocketdyne Cleanup Coalition

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cont'd

not simpler TPH molecules. As part of the soil cleanup analysis in the Final EIS, DOE is not proposing to leave PAH contaminated soil in place that could pose a risk to human health and the environment. Soils containing high concentrations of TPH would be removed by DOE. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

148-11 DOE is not proposing to leave in Area IV any soil at concentrations that could pose a risk to human health and the environment. All such soil would be removed. What may be left within Area IV would be soil at similar concentrations to that left at EPA Cy ERCLA sites and DTSC soil cleanup sites in California.

Risk-based alternatives establish cleanup levels based on an assumed future use of the site. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. In addition to the alternatives evaluated in the Draft EIS, this Final EIS includes risk-based scenario based on use of the land as open space. All of the action alternatives and scenarios analyzed in this Final EIS would leave the property safe for use as open space (park land).

148-12 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. The soil exemption process was developed jointly with USFWS, CDFWS, and DTSC staff. USFWS issued their Biological Opinion in August 2018 and CDFWS provided a letter of concurrence with the exemption process in December 2017. As noted in Section 2.4 of this CRD, the 2010 Biological Opinion has very limited applicability to the present project with regard to impacts on Braunton's milk-vetch and its critical habitat. The Cleanup to AOC LUT Values Alternative would have a far greater impact

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

on Braunton's milk-vetch and its critical habitat compared to the EPA project because soil remediation requires removal of vegetation and soils, including the seed bank, which is a profound and difficult impact to mitigate. However, the EPA action that was the subject of the 2010 Biological Opinion involved no removal of soils, which leaves the potential for rapid recovery of the vegetation and habitat by re-sprouting or germination from the soil seed bank. At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The proposed exemption areas for biological resources presented in the Draft and Final EIS were determined through consultation with USFWS as part of the USFWS Biological Opinion, (Appendix J of this Final EIS), and with CDFW and DTSC staff. The proposed exemption areas include areas identified in the Biological Opinion for protection under the Federal ESA, as well as areas identified by DOE for protecting sensitive species and sensitive habitat consistent with State laws and regulations and local ordinances. This Final EIS reflects the results of the Biological Opinion on the definition of exemptions areas in Area IV and the NBZ.

With regard to the number of protected species reviewed in the Draft EIS, the commenter's characterization of the species is correct. However, the EIS preparers used accepted professional practice to include information about threatened or endangered species (either listed federally or by California) that could possibly occur on the SSFL property (based on their distributions and ecological requirements) before narrowing to species known or expected to occur on the site based on review of this information and field surveys. The number of species identified in this Final EIS reflects the results of the Biological Opinion from the USFWS and input from the CDFW and DTSC as discussed in the preceding paragraph. This process is explained further in Chapter 3, Section 3.5.5, "Threatened, Endangered, and Rare Species" of this Final EIS; the species and habitats identified for protection are discussed in Section 3.5 and Appendix B, Section B.5. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD, for additional information on this topic. Tables 3-6 and 3-7 list plant and animal species that are known to be present within Area IV and the NBZ. The Tables also describe the potential for the species to be found at SSFL, particularly locations where soil removal could occur.

- 148-13** Under NEPA, DOE has a legal obligation to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. The evaluations must include an assessment of potential impacts,

**Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition**

those deemed positive and negative, from implementing the alternatives. A thorough evaluation of the potential impacts on site biological resources is presented in Chapter 4, Section 4.5, of this Final EIS. That evaluation indicates that alternatives that remove larger amounts of soil would be more difficult to restore given specific soil requirements of native plants, which would also affect the animal populations reliant on the plant community. A complete understanding of the impacts is necessary for all involved parties to make an informed decision.

- 148-14** Exemptions for cultural resources are provided for in the 2010 AOC and would be based on the presence of cultural resources, as defined in Final EIS Chapter 3, Section 3.11.1. DOE is obligated to protect National Register of Historic Places (NRHP)-eligible cultural resources by resolving adverse effects by avoiding, minimizing or mitigating them. Although at this time no archaeological sites in Area IV or the NBZ have been listed on the NRHP, numerous sites are considered eligible for listing on the NRHP, which confers the same status as an actual listing (refer to 36 CFR 800.16(l)(2)). Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD for a discussion of the process that will be used to determine exemptions.
- 148-15** As explained in the Draft EIS, DOE used suburban residential risk-based screening levels (RBSLs) or risk slope factors based on the direct exposure pathways and without the indirect garden pathway to evaluate potential impacts to an onsite receptor. This scenario was used because Boeing, the landowner, had indicated that it would be cleaning up to a residential without garden scenario. Since publication of the Draft EIS, The Boeing Company (Boeing) and North American Land Trust, in 2017, recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. These conservation easements impose restrictions beyond those in county zoning and planning documents.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing’s conservation easement and agreement (i.e., cleanup levels are based

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

on exposure of an onsite recreational user as the receptor). The Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

- 148-16** DOE disagrees with the statement that “the end of the site is irrelevant to the cleanup”. “End state” is a primary factor considered by EPA and California DTSC in establishing cleanup criteria. The data and analyses in this Final EIS indicate that all of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment. None of the alternatives would leave “tremendous contamination” within Area IV. Please see Section 2.7, “Offsite Impacts,” of this CRD for discussions of concerns about offsite impacts.
- 148-17** The commenter is mistaken that the 1995 DOE-EPA Joint Policy creates a framework for the conduct of decommissioning of all DOE facilities. It only ensures compliance with CERCLA requirements for remedy selection at National Priorities List facilities. Since SSFL is not on the National Priorities List, would not have been applicable. However, note that this EIS does include an alternative/scenario consistent with the approach and process used by EPA in CERCLA cleanups.
- 148-18** While the comment is not on the scope or content of this Final EIS the following information is being provided.

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013. The grant to the CAG was funded through local project funds in an effort to support community engagement. DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards. Information on the SSFL CAG grant can be found here: <http://go.usa.gov/xWpte>.

Commenter No. 148 (cont'd): Marie Mason, Dawn Kowalski,
Rocketdyne Cleanup Coalition

DOE's Office of Environmental Management started the Community Involvement Fund (CIF) to increase public involvement in the environmental management decision-making process and assist stakeholder groups with analyzing environmental management plans and proposals. The CIF operated from late 2010 until September 2015 and distributed a total of \$1.6 million through 46 grants to 23 recipients around the country, including groups involved in observing SSFL cleanup preparation. These included:

- \$46,800 in 2011 to the Committee to Bridge the Gap.
- \$55,000 in 2012 to the SSFL Advisory Panel, partnering with the Committee to Bridge the Gap. The SSFL Advisory Panel is not related to the SSFL CAG.
- \$23,000 in 2013 to Physicians for Social Responsibility – Los Angeles, partnering with the Rocketdyne Cleanup Coalition, Teens Against Toxins and Committee to Bridge the Gap.
- \$20,000 in 2014 to Physicians for Social Responsibility – Los Angeles, partnering with Teens Against Toxins and the SSFL Work Group, which is not related to the SSFL CAG.

148-19 Considering public comments on the Draft EIS is an important step in the EIS process. DOE provided multiple means for public comment. Comments could have been submitted directly via the website. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Members of the public were also invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS. With respect to PowerPoint presentations during the public hearings, slide presentations by commenters were not allowed during the oral comment periods at the public hearings in order to give all commenters equal time; however, presentations could be submitted by providing a printout of the presentation at the public hearing or by U.S. mail, or by uploading the presentation on the comment website.

Commenter No. 149: Tom Nachtrab

Tom Nachtrab
[Redacted]
[Redacted]
[Redacted]

March 1, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U. S. Department of Energy
4100 Guardian Street
Simi Valley, CA 93063

Comments on: *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS) (DOE/EIS-0402)*

Dear Ms. Jennings,

I submit the following comments on the Draft Area IV EIS as a community stakeholder, living approximately four miles from the former Santa Susana Field Laboratory. Although I am a director of the Santa Susana Mountain Park Association and a member of the SSFL Community Advisory Group, the statements below are my personal comments and do not represent any organization.

Quality of the Draft Area IV EIS document:

I commend the preparers of the DEIS for the high quality of the document itself. It is a well-written document: carefully worded, well-organized, and competently reasoned. The document is a straightforwardly understandable and discussible platform for community consideration of the many complex issues entailed by the remediation of Area IV.

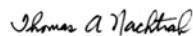
Presentation of multiple alternatives for soil remediation:

It is satisfying to see that DOE's EIS is faithful to the intent of both NEPA and CEQA laws by defining and evaluating reasonable soil remediation alternatives in addition to the "No Action" and "AOC Look-Up Table Values" alternatives. The EIS is correct to put forward two additional alternatives that also strive to safeguard the health of humans, wildlife and the environment. Drawing the distinction between a "Proposed Action" (AOC Cleanup) and a "Preferred Alternative" (yet to be decided) aids the public in comprehending and discussing the complex situation of remediation of Area IV.

I support "Conservation of Natural Resources" as Preferred Alternative for Soil Remediation:

The soils of Area IV must be cleaned up. "No Action" is not a responsible alternative. Likewise, the "AOC Look-Up Table Values" alternative must be ruled out because it presents unresolvable technical dilemmas, runs the risk of redistributing contaminants through transport activities, and entails excessive truck traffic through surrounding communities. The health risk projection for the "Conservation of Natural Resources" alternative falls within the USEPA acceptable target cancer risk range. The "Conservation of Natural Resources" alternative thereby protects human health, and does so at less cost and in less time than other alternatives. The "Conservation of Natural Resources" alternative balances multiple complex variables and is the best real-world choice for "Preferred Alternative."

Sincerely,



Tom Nachtrab

149-1

149-1 Thank you for your comment.

149-2

149-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

149-3

149-3 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 150: Joshua Osborne

Ms. Stephanie Jennings
 NEPA Document Manager
 SSFL Area IV EIS
 US Dept. of Energy
 4100 Guardian St., Suite 160
 Simi Valley, CA 93063

Ms. Jennings,

As a concerned member of the community, it upsets me deeply that the alternatives listed within the Draft Environmental Impact Statement are in direct contention with the commitments in both the 2007 Consent Order for Corrective Action (COCA) and the 2010 Administrative Order on Consent (AOC). I understand that as an agency you are required to submit an Environmental Impact Statement before remediation begins, but options that are in direct violation of legally binding documents are not to be entertained. Not only does such blatant disregard for previous commitments jeopardize the Department's integrity, but it also degrades the public's trust in the competency of the Department to complete tasks. Record of your current devious tactics will severely hinder the Department's ability to make any sort of negotiations or deals in the future.

The Department of Energy has promised no less than two times in legally binding documents that they would clean the contamination to the fullest: all the way to the safest background levels. These documents include the 2007 COCA and the 2010 AOC. It is outrageous that, despite their legal commitments, DOE seems to be seriously considering actions that operate in direct violation of sections 1.8.2-1.8.2.3 of the 2010 AOC. These sections explicitly state *only* onsite treatment or removal of contaminated soils will be considered and bars any other options. Section 1.8.2.2 says "'Cleanup to Background Levels" does not include "leave in place" alternatives.' and section 1.8.2.3 continues "'Cleanup to Background Levels" does not include onsite burial or landfilling of contaminated soils.' Considerations leaving 34%, 86%, or 94% of the contamination present on-site is absolutely irresponsible. These are the rough percentages of cleanup estimations on the three main proposals in the draft EIS, but there is a rather deceitful provision that allows an extra 5% of the contaminations in any situation, moving the percentages of contamination left onsite to 39%, 91%, and 99% respectively. This is absolutely outrageous and downright despicable. The contamination has been left for over half of a century and leaving it for the proposed 70 *additional* years in the hopes the problem of contamination rids of itself is not only daft, but also sends a clear message to the community that the DOE doesn't care about them.

150-1

150-1 As the commenter implies, NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). As discussed in Section 2.2, the alternatives evaluated do leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 150 (cont'd): Joshua Osborne

In 2010, when both NASA and DOE signed the AOC with the DTSC, they agreed to clean up SSFL to background levels of contamination. In fact, in 2011, NASA made claims in their respective EIS that were similar to those DOE are now making: that the National Environmental Protection Act (NEPA) requires the agency to look at alternatives that would violate the AOC. However, after NASA introduced their EIS, the Council for Environmental Quality (CEQ) decreed that NASA *must comply with the AOC* and it was “unnecessary to consider alternative cleanups that would breach [the AOC].” The Department of Toxic Substances Control echoed CEQ’s decision by directing NASA to look at *how* to cleanup to the standards set in the AOC, rather than *whether* to clean up to them.

As recently as 2012, DOE seemed to respect the CEQ’s decision, when they issued a notice of “Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement” that acknowledged it was obligated to carry out the AOC requirement to cleanup to background, and that the EIS would be limited to ways to achieve that cleanup standard.

DOE, NASA, and Boeing all stand legally responsible for the pollution on-site and subsequently have no right to decide what they should clean and how much they should clean of their own mess. It should also be noted that the COCA clearly states that hazardous materials and contaminants can and have migrated offsite, in Sections 2.11 and 2.12, before continuing that all respondents (DOE, NASA, and Boeing) must abide by DTSC workplans. Even if there were no AOC, the cleanup decision *still* rests with DTSC for the chemicals under the Resource Conservation and Recovery Act. In 2012, DOE’s scoping summary of SSFL acknowledged that DTSC was the regulator and decision-maker regarding how much contamination DOE must clean up. Despite this, the Department of Energy’s Draft Environmental Impact Statement barely accredits DTSC at all. The DOE is totally usurping DTSC’s rightful and legal authority.

It is distasteful and downright absurd that DOE would be given the opportunity to decide how much contamination is worth cleaning up as DOE stands, alongside NASA and the Boeing Company, as the polluters. DOE must be held accountable for the damage it has caused to the environment and to the people of the community.

Sincerely,
Joshua Osborne

150-2

150-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. The Draft EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, the Draft EIS also analyzed alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

150-3

150-3 DOE recognizes DTSC’s authority with respect to the AOC and the Resource Conservation and Recovery Act. DOE recognizes that DTSC needs to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC and DOE-prepared RCRA closure plans for building demolition.

Commenter No. 151: Matt Ruhland

This testimony was interrupted because it exceeded the minimal time limit for public comment. This document is being submitted so that the full statement may be on the record.

My name is Matt Ruhland and I grew up in Camarillo, only just recently learning about the Santa Susana Field Laboratory. In 2010 the DOE solemnly entered into an agreement with the state regulatory agency, the DTSC, whereby the site would be cleaned up to background; in other words, remove all the detectable contamination and return it to the condition it was in before DOE contaminated it. After two rounds of opportunity for public comment, in which more than 3000 comments were received, of which all but a handful were strongly in favor, DTSC and DOE executed the AOC in December, 2010.

There are several key components of the AOC. (1) It is legally binding; DOE cannot unilaterally choose not to comply with any part of it. (2) Cleanup of soil shall be to background. (3) And critically, no "leave in place alternatives will be considered."

In 2012, DOE issued a notice "Public Participation in the Development of Alternatives to be Considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement." In it DOE acknowledged that DTSC was the regulator and had the regulatory authority over the cleanup, that DOE was obligated to carry out the AOC requirement to clean up to background, and that the EIS would be limited to alternative ways to achieve that cleanup standard.

A few weeks ago, DOE issued its DEIS. And in it, DOE broke its commitments in the AOC and its past promises about any EIS. Every option it puts forward would leave in place large amounts of contamination, despite the explicit prohibition against that in the AOC. Option 1 would leave in place 39% of the contamination; Option 2 would

151-1

151-1 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In this EIS, DOE does not propose breaking the 2010 AOC signed with its regulator, DTSC. As stated in Chapter 2, Section 2.2.1 of this Final EIS, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 151 (cont'd): Matt Ruhland

leave in place 91%; Option 3 would leave in place 99%; and Option 4 would leave 100%. Furthermore, DOE also has broken its prior commitments that any EIS would be limited to different technologies to live up to its AOC obligations to clean up all the contamination, not whether to do so.

The DOE has lacked integrity and transparency when engaging with the public. Not only is it limiting the size of comments and file attachments submitted through the website, but we are only allowed 180 seconds to speak at these meetings. Even yesterday, DOE prohibited the public testifying today from presenting slides on the information we want to highlight in the DEIS, just as they did. We were denied, on the premise that contradicts the hearing notice. Nowhere on their public hearing announcements does it prohibit members of the public from presenting slides. So what they mean is, it would be unfair to give the people the same opportunity as the government. The public has asked numerous times for email comments to be accepted, as that is the most practical and effective way of communicating now-a-days. However, the DOE has refused, and even went so far as to delete the email address they had generated specifically for the DEIS, and presented as a means to contact the DOE.

If the DOE were genuinely interested in having public input, they wouldn't be so resistant to receiving it. DOE promised a full cleanup. DOE has now broken that promise, with an EIS filled with misrepresentations. And now it has worked very hard to frustrate the public's right to criticize that breach of commitments. This is not how to behave if, as you say, you have nothing to hide.

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151-2

151-2 Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in the EIS process. DOE's time limit on oral comments at the public meetings was set to allow all stakeholders equal time to present their comments. The intent was not to quell public comment; multiple means of submitting comments were available. These methods included the website, U.S. mail, providing oral comments during the public meetings or to the court reporter before the public hearings commenced, and providing a written transcript at the public hearings. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS. The purpose of the public hearings was to allow stakeholders to make comments on the Draft EIS. PowerPoint presentations were not allowed during the oral comment periods at the public hearings in order to give all commenters equal time; however PowerPoint presentations could be submitted by providing a printout of the presentation at the public hearing or by U.S. mail, or by uploading the presentation on the comment website.

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Commenter No. 152: Manny Ruiz

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Dept. of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

In the DEIS, the DOE claims that there are 150,000 cubic yards of soil where petroleum hydrocarbons (TPH) and polycyclic aromatic hydrocarbons (PAHs), as the only contaminants, make the soil amenable for remediation via natural attenuation. They claim it will take up to 15 years for the PAHs and 70 years for the TPH to biodegrade below AOC background levels (DEIS, s-21). In other words, the DOE wants to set aside 150,000 cubic yards of soil contaminated with extremely harmful substances and do nothing to prevent them from weathering into the surrounding area of the SSFL for decades.

The 15 and 70 year time frame is cited from the engineering and construction firm CDM Smith, who give a range of 0.42 to 69 years for TPH natural attenuation and 5 to 15 years for PAH natural attenuation (CDM Smith 2015b, 3-11). CDM Smith however, derived at those numbers not through their own means, but by citing a team of researchers at the Cal Poly College of Engineering in San Luis Obispo. Led by Professor Yarrow M. Nelson and his team of graduates, the Nelson studies are the main bodies of research behind the rates of natural attenuation for TPH and PAH cited in the DEIS. However, it is clear why the DOE indirectly cited the numbers of the Nelson studies through the CDM Smith report and did not cite the Nelson studies directly. By citing CDM Smith, and not the Nelson studies directly, the DOE allow themselves some wiggle room to remain operating in a shade of grey. The Nelson studies concluded that natural attenuation, though potentially effective in theory, would not be the solution to the decontamination problem in the SSFL. Something the CDM Smith report, and the DEIS failed to report. After reviewing the Nelson 2014 study for the *Feasibility of Natural Attenuation in the Soil of the Santa Susana Field Laboratory*, there are several major assumptions that the researchers made that make the theoretical natural attenuation rates for TPH and PAHs cited in the DEIS a perfect example of the inappropriate use of misinformation by the DOE.

It is important to point out that Yarrow M. Nelson and his Cal Poly SLO team acknowledge that without data from soil samples at the Santa Susana Field Laboratory requires a

152-1

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The TPH chemicals at the concentrations that are targeted for monitored natural attenuation are not “extremely harmful” as the commenter alleges. The commenter is correct in noting that the soil treatability study (Nelson et al. 2014, 2015a-d) concluded that some of the heavier PAH compounds are difficult to degrade; but, PAH chemicals are not the target for natural attenuation. Rather they are collocated in soil with PCBs and metals, and would be the target for soil removal. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation, if they are the only contaminant and would be evaluated on a location-by-location basis during development of soil remediation plans.) The EIS states that monitored natural attenuation would be considered for “low concentrations” of TPH chemicals in soils containing only petroleum contamination. Chapter 2, Section 2.3.2 of this Final EIS for additional information. In no circumstance would DOE consider natural attenuation for a location with soil containing chemicals that pose a risk to human health or the environment. Finally, the AOC does not prohibit the use of natural attenuation as a soil treatment option. The AOC, in Section 2.6 and 2.9, specifically allows for the use of onsite treatment measures, of which natural attenuation is one. As stated in the EIS, such onsite treatment would have to be approved by DTSC. DOE would be required to provide a Soils Remedial Action Implementation Plan that would provide sufficient information to demonstrate that natural attenuation would effectively achieve cleanup goals.

Commenter No. 152 (cont'd): Manny Ruiz

great degree of forecasting that render their calculations appropriate for “illustration purposes” at best (Nelson 2014, 22). Without running actual microcosm experiments with soil samples from the SSFL, the researchers came up with concentrations of TPH that range from 860 to 82,000 ppm to illustrate the amount of time it might take soil with TPH concentrations within that range to naturally attenuate. Any calculations computed from the hypothetical concentration range cannot be applicable to the SSFL’s site specific natural attenuation rates. Regardless, the researchers come up with a first-order rate of decay from the hypothetical concentration range and calculated that it takes up to 69 years for TPH to naturally attenuate to the target level of 5.7 ppm (Nelson 2014, 22). Furthermore, the researchers from Cal Poly made the assumption that the kinetic rate of decay would remain first-order throughout, they assumed that the rate at which the TPH reacts would be constant, but that is not the case. They go on to list a couple reasons why forecasting a first-order rate is incorrect. First, the fractions of TPH that biodegrade more easily will biodegrade first and leave behind the more recalcitrant compounds (Nelson 2014, 22). Second, some of the TPH will remain sequestered in the soil and be unable to biodegrade at all. Now, what both of these facts suggest is that since the soil of the SSFL has been contaminated for decades, it is very possible that the TPH compounds that are amenable to natural attenuation, have already biodegraded, and what is now polluting the SSFL soils, are the TPH compounds that do not, or cannot naturally attenuate without more active remediation processes.

Despite the Cal Poly researchers cautioning the DOE to take the calculations from their 2014 study lightly until more data is collected, the DOE completely rejected what they had to say and only presented the results from their calculations in the DEIS. However, the researchers did suggest ways to generate more accurate results. At the time this 2014 study was published to the DOE, the researchers were working on companion microcosm experiments to lend some much needed factual chemistry to their study. In 2015, several more reports on the SSFL were published to the DOE and are hence known as the Nelson studies. Collectively, they give a crystal clear conclusion on why natural attenuation is not a solution that works.

In 2015, Professor Yarrow M. Nelson and his Cal Poly team conducted a series of site-specific experiments to follow up the forecasting of their 2014 study. Before those studies were conducted however, questions were raised regarding the extent to which the presence of NOM

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Commenter No. 152 (cont'd): Manny Ruiz

was making the concentration of TPH in the soil appear to be higher. Therefore the researchers conducted a detailed analysis using mass spectroscopy to identify how much NOM was contributing to TPH and they found that NOM only attributed to a mere 3 to 8% of the TPH concentration in the soil (Nelson 2015d, 11). In order to make accurate predictions on the biodegradation rates for TPH and PAHs in the SSFL soil under current conditions, 9 soil samples were collected and treated using a varying array of techniques (Nelson 2015c, 73). Of the 9 soil samples, 3 of them were left unamended and studied to test the natural attenuation rate of TPH without any intervention. This mimics what will happen in the 150,000 cubic yards of soil proposed by the DOE to be set aside and left untouched. The results from the microcosm experiments concluded that the soil samples biostimulated with nitrogen and phosphorus fertilizer showed significant biodegradation. The 3 soil samples left unamended however, showed little to no biodegradation at all (Nelson 2015c, 74).

The biodegradation for PAH was even less promising. The study concluded that the lack of biodegradation is due to the fact that mostly polyaromatic hydrocarbons with compounds containing 4-6 aromatic rings are left in the soil and these tend to be the PAH compounds that are the most difficult to biodegrade (Nelson 2015c, 76). This tells us that the lighter PAHs that will biodegrade have almost certainly already done so, and what is now left will not be biodegrading on its own. Furthermore the Nelson studies concluded that as PAHs are absorbed by the soil, biodegradation becomes even more difficult through unamended and amended techniques, because as the bioavailability of the compounds are reduced, it is less probable that they will react with decomposers in their environment (Nelson 2015c, 74). This is exactly the reason why the 2010 AOC explicitly specified that a "leave in place" option is prohibited.

After testing biodegradation rates under the specific factors at play in the SSFL, the TPH and PAHs in the SSFL soil will not biodegrade to the target levels of 5.7 ppm. The proposal of the DOE in the DEIS to set aside 150,000 cubic yards and do nothing, is not a solution that will work. The Nelson studies have concluded that the TPH and PAHs that are left in the soil, will not biodegrade and therefore will not be removed from the soil unless physically excavated or treated with nitrogen and phosphorus fertilizer or other amended techniques. If the rest of the claims the DOE has made in the DEIS are as blatantly ill conceived as this, it will not take much

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152-2

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DOE acknowledges your comment. It has been added to the Administrative Record for the EIS.

Commenter No. 152 (cont'd): Manny Ruiz

to bring their plan to get out of the 2010 AOC cleanup agreement to an end. Anyone who reads through the DEIS and the attached references will see examples where the DOE has deliberately cherry picked which version of the truth is convenient to include in the DEIS.

However, when reading through the DEIS, it is often easy to get so caught up in every minor detail of every proposal and forget the reason why it is important that the DOE abide by the agreement it made to clean the SSFL. What is contaminating the SSFL is the byproduct of decades of accumulating radioactive and toxic substances. To illustrate the severity of the hazards contaminating the SSFL, one of the 10 nuclear reactors housed in the SSFL partially melted down. The Chernobyl incident in Ukraine is an example of what happens to life following a nuclear meltdown. Even though the meltdown in SSFL was only partial, it was enough to release countless radioactive particles into the environment. This has been allowed to leach into the soil, groundwater, and surrounding community for decades. It will not stop contaminating local territory until it is thoroughly decontaminated and cleaned.

The SSFL should have been cleaned by this year, but the DOE has postponed the cleanup. 2017 has already brought enough rain to allow the radioactive chemicals and toxic substances to runoff into the neighboring environment. Some of it eventually finds its way into residential areas where families are affected. And a lot of it will make its way into the ocean and affect all aspects of marine life. Every day the SSFL is allowed to be contaminated is another day that people and wildlife are at risk of being exposed to the harmful effects of the contaminants. The DOE must abide by the 2010 AOC, not simply because they are legally obliged to do so, but because their refusal to do otherwise is directly affecting the livelihood of countless communities.

Sincerely,

Manny Ruiz

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152-3

152-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

152-4

152-4 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 153: Jason Saxelby

THIS IS WHAT I LIVE WITH EVERY DAY.

1. **I have tested positive for the HLA-B27 gene.**
2. Daily Memory loss, recall issues, confusion and dyslexia. Simple things like where a particular letter is on a keyboard. Names, common names of items. Where things are that have a normal storage location. How to do things, such as put on coffee. I turn light switches on thinking it is off, I have severe trouble remembering my bank pin number, I usually can not remember my own address. I set 4 alarms to remind me to pick up my daughter from school. Extreme issues with recall. Very irritating at times. Causing stuttering and or long hesitations as well as frequent inability to complete a sentence at all.
3. Daily anxiety, particularly in the mornings and evenings but lasts throughout the day.
4. Daily numb or tingling lips and tongue. Only in the center of the lips, section about ½" to ¾" wide and only the very tip of the tongue.
5. Daily random dizziness. Always at least some dizziness with periods of extreme dizziness. With or without medications. Has definitely increased since I started blood pressure medications.
6. Daily fatigue. Extremely exhausted all the time. Regardless of getting sleep or rest, which I do NOT get.
7. Daily loss of sleep. Most nights can only sleep 1 to 4 hours. On really rare occasion when heavily medicated I can get up to 6 hours or so. Sleep Dr. ordered CPAP, but insurance would not cover. Still don't have it or have I tried to use one. If I were to sleep more than 4 hours it causes severe back pain in the mid section around the primary scoliosis pain area.
8. Daily itching. Every day itching around the head, face, upper torso, shoulders and lower legs. Itchy areas feel raw or with a stinging sensation. Skin gets red, dry, bumpy and very irritated. Kind of driving me nuts.
9. Daily and constant body jumping, twitching, trimmers or shaking. Uncontrolled and unwanted body twitching or trimmers. Even while sedated body continues to jump or twitch to the point that it took 10 attempts for 6 successful MRI's in the past couple years. Some trimmers are severally painful. Especially in neck, upper back and shoulders.
10. Daily Constant headache. Both sides of head, down back of neck, into upper back and across to shoulders. These can be debilitating. This is one of the most severe pains in my body. In November 2015 I had radio frequency ablation on both left and right C-3 through C-6. This had reduced the daily severity on some days, but headaches are back now.
11. Daily both eyes feel like there is something such as fuzz or a hair in them almost all the time. This is a constant issue and rarely feels ok. There is such irritation that it is obstructing my vision and making it blurry almost all the time.
12. Daily both eyes, vision is very blurry and continues to get worse. Glasses barely help with reading, but even with glasses it is really hard to focus on anything small or even medium in size. Reading glasses have gone up from 1.25 to 2.75 in the last year and now 2.75 is not enough. Can not find stronger reading glasses.
13. Right eye gets small bumps under and around it which are irritating and becoming worse.
14. Daily Both eyes really sensitive to light. Not always the same. Bright light causes immediate headache.
15. Hearing loss. 50% both ears in the high range. Audiologist confirmed 50% loss in high range and I believe it is getting worse.
16. Daily Both ears, constant ringing. So loud at times it keeps me up or wakes me at night. Can not hear normal conversations, tv, radio, etc. So I prefer to be alone, so I don't have to try and communicate.
17. Daily right ear has pain and a loud crackling noise. Extremely loud if I yawn or move my jaw with severe pain when it crackles.
18. Daily Jaw is grinding on the right side. This is worse in the mornings but does happen throughout the day.
19. Daily Jaw on the left side has bad pain. Radiates down my neck and up into my cheek bone.
20. Daily Constant neck ache. Rear of neck down top of back on both sides of spine and spreading into shoulders. Frequently painful or difficult to turn head in either direction without flaring a headache.
21. Daily Pressure tenderness. As far as I can tell this is on the whole body. Examples, can not wear a ring, watch or necklace. Shoes must always be very loose with no pressure on top of feet. Waistline has pain just to keep pants from falling. This always hurts 24/7. Tops of feet are the worse.
22. Daily Upper back pain. Both sides of spine from neck to a point about 8" to 10" down. Frequently swells out with large long lumps.
23. Daily I have scoliosis which causes extreme mid back pain. Middle section of back, both sides of spine. Sometimes swells out up to 1 ½". Very painful and irritating. If in bed more than 3 to 3 ½ hours pain becomes extremely severe. This never stops hurting and is becoming worse. Excruciating to even take a breath most days.

153-1

153-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 153 (cont'd): Jason Saxelby

24. Shoulders. Both shoulder joints grind at times and most days severe pain but always aching. Severe pain if I walk to much using my cane or crutches. Right shoulder is typically the worse, but lately the left is, both very limited in raising them without severe pain. Recently diagnosed as bilateral subacromial bursitis and tendonitis, possible arthritis that may need to be removed, possible tears in the cuffs and both shoulders have impingements and degenerative disease. Received injection on 11/03/15. It helped a lot for quite a while. Received a second set of injections in July 2016. These injections caused additional pain and no relief at all. Dr's assistant stated to me, the "Dr did not think they would help", due to all the issues in the shoulders.
25. Daily Elbows ache. Always tender. Sometimes lock and have to snap them back loose. Severe pain when this happens. Tender all the time to even rest on a couch cushion, pillow or table top.
26. Daily Muscle pains both forearms. This is a daily pain and is even soar to the touch.
27. Daily Muscle pains both biceps. This is a daily pain and is usually even soar to the touch.
28. Daily wrists ache. Daily issue and is very painful in the joints all the time. Pain is no radiating from my palm up through my wrist and from the back of my hand up into my forearm.
29. Daily left hand, main knuckles very painful with swelling, pain radiates up arm.
30. Daily right hand, main knuckles very painful with swelling, pain radiates up arm.
31. Fingers both hands extremely achy and swollen everyday. Having a lot of difficulty gripping my cane or crutches. Mornings are the worse, fingers swollen to the point I can not hold a cup of coffee and to the point it is difficult to even wipe my butt.
32. Daily Low back, excruciating pain all the time. Muscular and skeletal pain on both left and right sides. Bone pain throughout the area. I have had fusion at L5—S1. This can be one of the most severe pains in my body and it is there everyday 24/7. Extremely tender to the touch.
33. Shortness of breath. This is a daily thing and usually much more severe at night. Just can not catch my breath.
34. Random chest pain. Not crushing like heart problems. It is an ache in the dead center of the chest.
35. Daily Stomach issues. Diarrhea, constant cramping, lots of pain, very uncomfortable. GI Dr. performed an EDG and colonoscopy. Diagnosed with Barretts Esophagus, Hiatus Hernia, Gastritis, Diverticulosis of large intestine and first degree hemorrhoids.
36. Daily severe Acid reflux and it happens constantly.
Daily lower abdominal extreme pain. Recent CT scan identified Malignant Neoplasm of Posterior Wall of Urinary Bladder (Cancer). Treatment is ongoing.
37. Daily Sciatica from tail bone down right leg constantly. Pain levels do vary throughout the day. Daily pain, extremely debilitating to the point I can not take a step and at times causes me to fall.
38. Daily Sciatica down the left leg is intermittent. Pain comes and goes and increases and decreases. This has been increasing lately and is really becoming a severe issue.
39. Daily Right hip in constant pain. Over the past 6 to 10 months this has continued to get worse.
40. Left hip pain is intermittent. Over the past 6 months this has continued to get worse.
41. Daily Muscle pains on the top and the bottom of both thighs. This is a constant daily pain and is soar to the touch. Feels like wooden spoons stabbed into the muscles and tweaking them around.
42. Daily Muscle pains in both calves. Same pain as the thighs. This is a constant daily pain and is soar to the touch.
43. Daily Right knee, severely aches most of the time with occasional swelling. Knee buckles and occasionally causes me to fall. Bursa sacs were ruptured and removed in this knee as well.
44. Left knee, severe aches with occasional swelling and is becoming worse. Knee buckles and occasionally causes me to fall. Pain levels becoming more severe and consistently there.
45. Both ankles, pain worsening rapidly. Left ankle at times locks, when locked pain can be severe, now a daily issue. Right ankle is a constant severe ache. Both seem to be getting rapidly worse.
46. Daily Heel pain in both heels. **CONSTANT PAIN. This pain is excruciating daily and is hands down the worse pain I endure on a daily basis.** This is absolutely the worse pain in my body. It hurts no matter what. Standing, sitting, elevated feet, lying down, nothing helps to reduce pain. It feels like my heel bones were smashed with a hammer, repeatedly all the time, day and night. PLEASE STOP THIS PAIN. I have requested amputation of both feet. Doctors refuse and tell me, even if they were amputated the pain would remain.

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Commenter No. 153 (cont'd): Jason Saxelby

- 47. Daily Foot pain in both feet and throughout the entire foot. Pain and swelling does radiate up into the ankle and up the calve. The foot pain is out of control. It literally feels like my feet have been crushed in some horrible machine accident, all day, all night, everyday without any break of such extreme broken bone pains. With any walking, standing, sitting and my feet touching the floor at all or even laying down and my feet touching a mattress, the pain is literally unbearable. It feels like I have broken bones throughout my feet and nothing eases the pain. I am at the point to do anything to make this pain end. I am open to amputation to stop this pain. Additionally feet feel as if they are frozen all the time, however not to the touch, the actual feeling is in my feet. Pain is worsening, with this recent cold weather setting in, the pain is getting even worse, which I did not believe was even possible. Both feet have severe pain and is completely unbearable.
- 48. Daily muscle pain throughout body. Muscles just hurt and ache all the time. Never stops and is definitely getting worse.
- 49. Daily bone pain throughout body. It just feels like my bones ache and hurt. Never stops and appears to be getting worse. My bones everywhere hurt to the touch.
- 50. I have no other way to say it other than I HURT EVERYWHERE, ALL THE TIME, IT BRINGS TEARS TO MY EYES JUST TO BREATHE.

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Commenter No. 153 (cont'd): Jason Saxelby

Current Known Diagnoses as I Understand Them.

HLA-B27 Positive

Malignant Neoplasm of Posterior Wall of Urinary Bladder (Cancer)

Fibromyalgia

Chronic Pain Syndrome

Enthesitis

Tarsal Tunnel

Planter Fascia

Scoliosis

I.B.S.

Cronic Migraine Headaches

Sialadenitis

TMJ Arthritis

Facial Pain

Anxiety

Gastro Esophageal Reflux Disease (GERD)

Spinal Fusion L5 to S1

Squamous Cell Carcinoma on Right Hand

Insomnia

Bilateral Shoulder Subacromial Bursitis

Bilateral Shoulder Rotator Cuff Tendonitis

Bilateral Mild - Moderate Shoulder Degenerative Changes

Probable Bilateral Shoulder Rotator Cuff Tears

Bilateral Shoulder impingements

Cervical Facet Syndrome

Lumbar Facet Syndrome

Barretts Esophagus

Hiatus Hernia

Gastritis

Diverticulosis of large intestine

First Degree Hemorrhoids

50% Hearing Loss in the High Range

High Blood Pressure

Venous Reflux Disease

Metatarsus Primas Vera in both feet

Bunion R Foot

Hammer Toe R Foot

Osteoarthritis Both Feet

Pes Planus Both Feet

Osteoarthritis Hip Joints

Osteoarthritis Both Hands

Synovial Proliferations Both Hands, Wrists, Feet, Ankles

Joint Effusions Both Hands, Wrists, Feet, Ankles

Liver Mass, Without any additional details

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Commenter No. 153 (cont'd): Jason Saxelby

Current Medications

Percocet	10/325 Five tablets daily
Robaxin	500mg three tablets daily
Losartan	50mg Once Daily
Humira	1 injection every 2 weeks
Valium	10mg ½ to 1 tab as needed
Meloxicam	15mg Once Daily
Generic Imodium	4mg in the morning and 4mg at bedtime
Zantac	150mg at bedtime
Pyridium	200mg as needed
Omeprazole	40mg in the morning
Zolpidem	5 to 10mg at bedtime
Acetaminophen	1300mg twice daily. Only take when I must due to stomach issues.
Ondansetron	4mg as needed
Fluticasone Propionate	100mcg twice daily
Diclofinac Gel	3% Daily on feet and heels
Lidocaine Ointment	5% Daily on feet and heels
Lidocaine Patch	5% as needed on my back
Relyyt Patch	.0025-5% One to two times daily on back

Discontinued Medications

Oxycodone	15mg Three times daily
Morphine	10mg Four times daily
Butrans Patch	10mcg/h One patch per week.
Fentanyl	12mcg/h One patch every 3 days
Norco	10/325 Three times daily
Soma	350mg 1 to 3 daily
Tramadol	100mg in the morning 100mg at bedtime
Lyrica	150mg in the morning and 150mg at bedtime
Klonopin	1 tab nightly (I do not like these, makes me feel intoxicated for 36 hours)
Hyoscyamine	1.5mg daily
Tylenol # 3	As Needed
Pantoprazole	40mg in the morning
Cymbalta	30mg daily later raised to 60mg daily
Meloxicam	15mg daily
Celebrex	400mg daily
Flexiril	5mg at bedtime (usually break into smaller doses due to lingering effects)
Voltaran	As needed
Temazepam	15mg at bedtime (asked for different one, this one leaves a LONG hangover effect)
Minocycline	100mg in the morning and 100mg at bedtime for two weeks
Amoxicillin	1000mg in the morning and 1000mg at bedtime for two weeks
Sevella	MIS TITR PAK
Tadalafil	5mg daily
Dicyclomine	As needed only per GI Dr. Amaro
Neurocet	1 Capsule Daily
Xifaxan	550mg 3 times a day for 14 days
Magnesium	250mg daily
Zinc	50mg daily
Stemtek	2 Capsules Daily
CBD Oil	250mg 25 drops Daily

There is probably more, but I can no longer keep up with meds that have come and gone.

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Commenter No. 153 (cont'd): Jason Saxelby

Current Diagnoses

HLA-B27 Positive
Bladder Cancer Synovial Proliferations
Fibromyalgia Bunion R Foot
Enthesitis Hammer Toe R Foot
Tarsal Tunnel Osteoarthritis Both Hands
Plantar Fascia Joint Effusions
Scoliosis Osteoarthritis Hip Joints
I B S Metatarsus Primus Vera Feet
Anxiety Osteoarthritis Both Feet
Insomnia Pes Planus Both Feet
Gastritis TMJ Arthritis
Hiatus Hernia Sialadenitis
Barrett's Esophagus GERD
Chronic Pain Syndrome
Chronic Migraines
High Blood Pressure
Venous Reflux Disease
Spinal Fusion L5 x S1
Squamous Cell Carcinoma
Bilateral Shlder Subacromial Bursitis
Bilateral Shlder Rotator Cuff Tendinitis
Bilateral Mod Shlder Degen Changes
Bilateral Shlder Rotator Cuff Tears
Bilateral Shoulder impingements
Cervical Facet Syndrome
Lumbar Facet Syndrome
Diverticulosis of large intestine
First Degree Hemorrhoids
Probable Undifferentiated Spondyloarthritis
50% Hearing Loss in the High Range

Current Medications

Zantac 150mg at PM
Omeprazole 40mg in AM
Percocet 10/325 Five Daily
Meloxicam 15mg Daily
Robaxin 500mg Three Times Daily
Humira 40mg injection every 2 Weeks
Valium 10mg ½ to 1 tab as Needed
Zolpidem 10mg at bedtime
Acetaminophen 1300mg As needed
Zofran 4mg as needed
Diclofinac Gel 3% Daily on feet & heels
Lidocaine Patch 5% as needed
Lidocaine Oint 5% Daily on feet and heels
Rellyt Patch 0025 5% daily on back
Losartan 50mg Daily
Generic Imodium 4mg AM & 4mg PM
Prednisone 50mg tabs 1 a day x 3 days
Pyridium 200mg As Needed
Fluticasone Propionate 100mcg twice daily

Primary Care Physician

Dr. Young



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Commenter No. 154: Sonia Schendel

This testimony was interrupted because it exceeded the minimal time limit for public comment. This document is being submitted so that the full statement may be on the record.

My name is Sonia Schendel and I am deeply upset by DOE's DEIS which breaks its legally binding 2010 AOC promise for a full clean up at the site. Every one of the cleanup options in the DEIS violates the AOC, leaving in place from 39% to 100% of the contamination, when the AOC bars consideration of any leave in place alternatives. Any failure to do a full clean up, as promised, is unacceptable, posing continued risks to offsite communities. The heavy rains we have just experienced should remind us of the pollution that runs off that hill and will continue to until there is full cleanup.

Among its various excuses for not doing the cleanup, in all of the DEIS options DOE proposes to not clean up about 300 thousand cubic yards of soil that they contaminated by claiming what they purport to be a biological exemption. But they are grossly misrepresenting this biological exemption, which is strictly limited in the AOC and for which they do not qualify.

In the 2010 AOC it was stated that the entire site must be cleaned up to local background levels. It allowed a very narrow exception to be considered only to the extent that the U.S. Fish and Wildlife Service, and I quote:

issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.

There has, however, been no such Biological Opinion from the U.S. Fish and Wildlife Service. The exemption does not apply.

Indeed, the US Fish and Wildlife Service did issue a Biological

154-1

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NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. As noted in Section 2.4 of this CRD, the 2010 Biological Opinion referenced in your comment has very little applicability to the current situation in terms of impacts on Braunton's milk-vetch and its critical habitat, which would be far more severe as a result of the soil and seedbank removal required for cleanup to AOC LUT values.

At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS has now issued a Biological Opinion

Commenter No. 154 (cont'd): Sonia Schendel

Opinion several years ago to EPA for its preparatory work for the cleanup, which was to involve cutting down much of the vegetation so a radiation survey could be done. It concluded no problem; mitigation measures could be done, and that indeed, the cleanup of the contamination was critical for protecting biological resources.

The DOE DEIS, however, says that they are not going clean up anything in any of their self-declared biological exemption areas. DOE has no right to declare these areas or decide for themselves how to handle them. Furthermore, the guidelines say that if biological resources are identified mitigation measures are to be taken, not that DOE could avoid cleanup altogether.

DOE is rather shamelessly trying to use the claim of conservation of natural resources as an excuse to break its obligations to clean up the toxic damage it did to those resources. They are claiming to want to protect the environment and species by not cleaning up the contamination, when really all they are doing is hurting the ecosystem as a whole by proposing to leave these deadly chemicals and radiation in place. If they were concerned about the environment, they wouldn't have polluted it in the first place. Breaking the legally binding cleanup obligations would be an outrage, in terms of environmental wellbeing, species wellbeing and the wellbeing of general human health.

154-3
cont'd

154-4

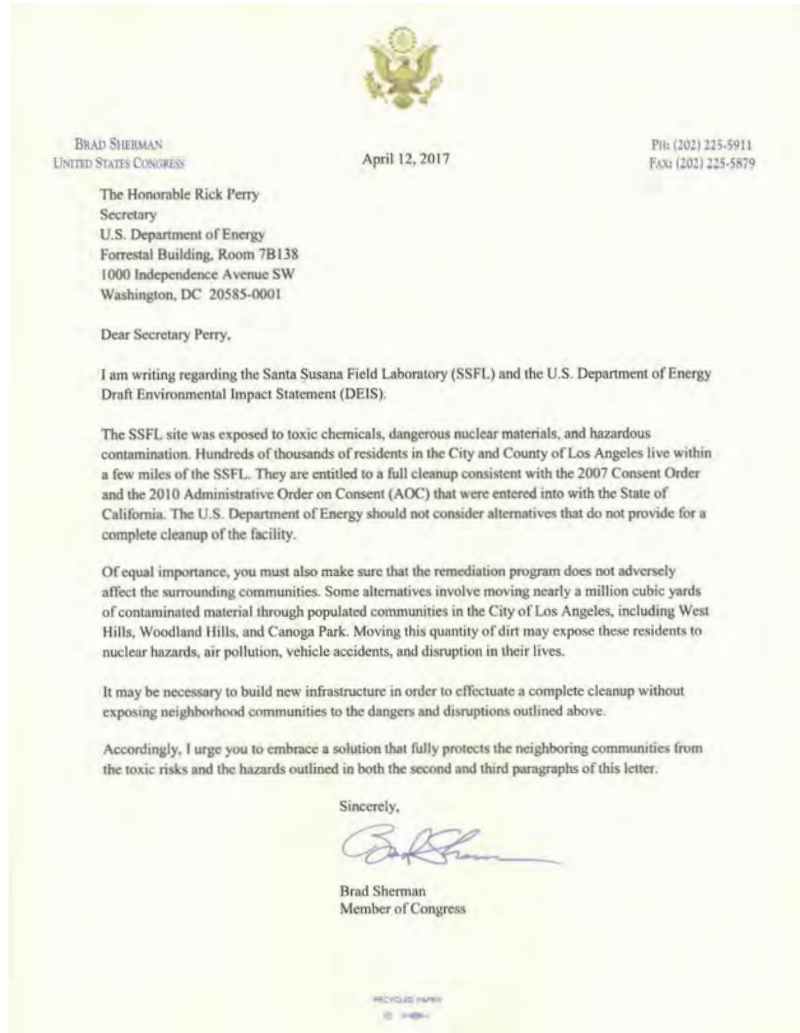
154-1
cont'd

154-4

(see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on the exemptions areas in Area IV and the NBZ. As discussed in Chapter 2, Section 2.3.2, of this Final EIS, soils within the boundary of an exemption area that have higher concentrations of chemicals or radionuclides (above human health or environmental Risk Based Safety Levels [RBSLs]), that is, those that pose a risk to human health or to plants and animals would be subject to focused removal actions. Application of exemptions would be based on the process described in the USFWS Biological Opinion for biological resources and NHPA Section 106 Programmatic Agreement (being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC) for cultural resources. DOE acknowledges that DTSC would have to approve the cultural exemptions, the biological exemptions are specifically allowed in the 2010 AOC.

Please see the responses to comments 154-1 through 154-3. As discussed in Chapter 2, Section 2.1 of this Final EIS, consideration of conservation of natural resources in the development of the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment (conserves natural resources) and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. The Conservation of Natural Resources Alternative does not "leave these deadly chemicals and radiation in place." The alternative focuses on where contamination posing human health or ecological risk exists and targets those locations for cleanup. Following soil cleanup, Area IV will be safe for use by recreationists and ecological receptors.

**Commenter No. 155: Congressman Brad Sherman,
Member of Congress, U.S. House of Representatives**



155-1

155-2

155-1 DOE acknowledges your concern about complete cleanup of SSFL consistent with the 2007 Consent Order and the 2010 AOC. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

With respect to the alternatives evaluated in this Final EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, the EIS also analyzed alternatives that determine cleanup levels by considering risk to human health, ecological risks, and the protection of natural resources. The use of a risk assessment approach for soil cleanup is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Note that DTSC is preparing an environmental impact report under CEQA that also analyzes alternatives for the cleanup of Area IV and the NBZ, as well as those portions of SSFL which are the responsibilities of NASA and Boeing. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in September of 2017 (DTSC 2017b).

Over the operation history of the site, there have been 272 numbered structures in Area IV. As the missions for the buildings ended, they were decontaminated and removed. Today only 22 structures, 18 DOE-owned and 4 Boeing-owned, remain within Area IV. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an

**Commenter No. 155 (cont'd): Congressman Brad Sherman,
Member of Congress, U.S. House of Representatives**

off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act (Also see Chapter 3, Figure 3-19 of this EIS).

Please refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

- 155-2** Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response. As described in Chapter 4, Section 4.8.1 and Appendix H of this Final EIS, the transportation risks are very small. Air quality impacts from proposed offsite haul truck transport would be minimal, due to the relatively low emission rates of vehicles used for site remediation and offsite transportation of soil. See Chapter 4, Section 4.6.4.2, of this Final EIS for additional discussion of air quality impacts.

Commenter No. 156: Rabbi Jay A. Strear,
American Jewish University (AJU)



OFFICE OF RABBI JAY A. STREAR
SENIOR VICE PRESIDENT

April 13, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: DOE/EIS-0402, Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

American Jewish University ("AJU") thanks the U.S. Department of Energy ("DOE") for the care and effort put into the Draft Environmental Impact Statement ("Draft EIS") for Remediation of Area IV and the Northern Buffer Zone ("NBZ") of the Santa Susana Field Laboratory ("SSFL").

AJU owns and operates the Brandeis Bardin Campus ("BBC"), a 2,878-acre Jewish camp and educational center situated immediately to the north and northwest of Area IV and the NBZ. The continued health and safety of the BBC's campers, staff and visitors are AJU's highest priorities regarding the campus, and we take very seriously our obligation to do whatever is necessary to assure its continued safety. In addition, we are ever mindful of the importance of assuring the safety of the areas surrounding BBC and the well-being of inhabitants and users of those areas. Accordingly, it is AJU's position that any cleanup must adhere to all applicable federal and state laws, but should appropriately balance the remedial goals with any potential adverse impacts remediation activity would cause to either human safety or the environment in and surrounding SSFL. Consistent with that, AJU fully endorses a responsible, thorough, and effective cleanup of SSFL.

As AJU lacks the technical expertise to fully evaluate the Draft EIS and the various alternatives presented, we have retained Tetra Tech, Inc. ("Tetra Tech") to help us identify areas where there may be potential concerns and/or open questions arising out of the remediation alternatives presented in the Draft EIS. Tetra Tech's DEIS Review Technical Memorandum is incorporated by reference into this comment letter to the DOE. We respectfully request that the DOE respond to the issues identified in the attached Technical Memorandum so that we can more fully understand and evaluate the various alternatives presented in the Draft EIS.

Finally, AJU wishes to express its support for the designation of the SSFL as open space. An open space designation would protect the environment, safeguard animal and plant habitats, and preserve sacred/historic sites and artifacts, like those of the Native American Chumash and NASA/DOE, while also inspiring greater recreational use of this historically unique area.

Thank you for your consideration.

Rabbi Jay A. Strear

156-1

156-1 All comments in the attached Review Technical Memorandum have been responded to individually.

156-2

156-2 DOE does not own any property in Area IV or the NBZ and therefore cannot determine the ultimate land use. As discussed in Chapter 2, Section 2.2.3, of this Final EIS, the property owner, Boeing, has committed to preserve the land as open space for the public's benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. They permanently bind the property, regardless of who owns the land. North American Land Trust will monitor and enforce the easement.

Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

**DEIS Review
Technical Memorandum**

Santa Susana Field Laboratory
Simi Valley, California

Prepared for

American Jewish University
15600 Mulholland Drive
Los Angeles, California 90077

April 13, 2017

Prepared by



TETRA TECH, INC.

3801 Automation Way, Suite 100
Fort Collins, Colorado 80521

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**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

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**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

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**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

ACRONYMS AND ABBREVIATIONS

%	percent
AJU	American Jewish University
AOC	Administrative Order on Consent
BBC	Brandeis Bardin Campus
BMP	Best management practice
CDPH	California Department of Public Health
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CMWD	Calleguas Municipal Water District
CO _{2e}	Carbon dioxide equivalent
DEIS	Draft Environmental Impact Statement
DOE	Department of Energy
DTSC	California Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ESAL	Equivalent single-axle load
GHG	Greenhouse gasses
LCF	Latent cancer fatalities
LOS	Level of service
LUT	Look-up table
MCL	Maximum contaminant level
MNA	Monitored natural attenuation
NBZ	Northern Buffer Zone
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
RBSL	Risk based screening level
ROI	Region of influence
SSFL	Santa Susana Field Laboratory
USC	United States Code
V/C	Volume to capacity ratio

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Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

1.0 INTRODUCTION

On behalf of American Jewish University (AJU), Tetra Tech conducted an independent technical and scientific review of the DOE/EIS-0402 *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory* (DEIS). This technical memorandum presents the findings of this analysis.

2.0 SCOPE OF WORK

The purpose of this review is to assist AJU in analyzing the potential impacts of the cleanup alternatives proposed in the DEIS on AJU's Brandeis Bardin Campus (BBC), which is situated to the north and northwest of the Santa Susana Field Laboratory (SSFL).

This analysis provides Tetra Tech's technical evaluation of the DEIS soil remediation alternatives, the potential effects of those alternatives on the BBC, and a practitioner's evaluation of whether the DEIS analysis was conducted in accordance with the National Environmental Policy Act (NEPA; 42 United States Code [USC] 4321 et seq.), Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the Department of Energy (DOE) NEPA Implementing Procedures (10 CFR Part 1021). The analysis also considers the impact on the environment from the soil remediation alternatives considered in the DEIS.

3.0 BACKGROUND

The DEIS is intended to inform Federal decision makers about remediation of contaminated soil and groundwater, building demolition, restoration of impacted environment, and disposal of chemical and radioactive waste at Area IV and within the Northern Buffer Zone (NBZ) of the SSFL in Ventura County, California. The DEIS analyzes the potential environmental impacts of a variety of alternatives for conducting cleanup activities in Area IV and the NBZ.

Currently, for soil remediation, DOE's proposed action is to implement the technical requirements of the *2010 Administrative Order on Consent for Remedial Action* (2010 AOC) between DOE and the California Department of Toxic Substances Control (DTSC). Under this alternative, the cleanup must meet the Look-Up Table (LUT) values for residual chemicals and radionuclides in soil that were established in accordance with the 2010 AOC (DTSC 2010). This proposed action is detailed in the DEIS, and referred to herein, as the AOC Alternative.

The AOC LUT values are considerably more stringent than what would be typically be applied in a standard risk-based cleanup, and DOE recognizes that there are substantial hurdles to achieving remedial goals consistent with the 2010 AOC. Therefore, consistent with the requirements of NEPA, DOE has proposed multiple cleanup alternatives in the DEIS. These are the "no action" alternative, the Cleanup to Revised LUT Values Alternative (herein the "Revised LUT Alternative"), and the Conservation of Natural Resources Alternative (herein the "Conservation Alternative").

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**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

4.0 GROUNDWATER

4.1 OVERVIEW

The region of influence (ROI) for Groundwater Resources is defined as Area IV, the NBZ, and offsite areas to the north of the NBZ, where groundwater discharges at the surface through seeps and springs. Groundwater plumes where contaminants exceed the Maximum Contaminant Levels (MCLs) exist within the ROI. Known groundwater plumes are primarily in Area IV, although up to three plumes may extend into the NBZ.

The impact thresholds are groundwater quality and the quantity of groundwater available to vegetation and wildlife. Cleanup goals for groundwater have not been established. While the scope of the groundwater analysis is generally commensurate with industry practice, the DEIS analysis is missing some critical information which is necessary to fully analyze and compare potential impacts of the various alternatives. The information gaps and areas needing further analysis are described below.

4.2 ANALYSIS OF ALTERNATIVES

The DEIS concludes that implementing the soil remediation alternatives would result in minor adverse or beneficial impacts. The relative level of impact across the four soil remediation alternatives is:

- AOC Alternative: no adverse impact/minor beneficial impacts
- Revised LUT Alternative: no adverse impact/minor beneficial impacts
- Conservation Alternative: no adverse impact/minor beneficial impacts
- No Action Alternative: minor adverse impact

Assessing the validity of these conclusions, however, is challenging given that the DEIS is missing some critical factual descriptions and substantive analysis. First, the DEIS contains minimal discussion of subsurface hydrology, especially as it relates to the possible migration of groundwater plumes, how well-defined the plumes are in terms of vertical and lateral extent, and potential hydrologic connectivity to on- and off-site seeps and springs. The DEIS should disclose how well plume stability has been defined and, for stable well-defined plumes, consider monitored natural attenuation (MNA) as the preferred remediation alternative. The DEIS should disclose hydrologic connectivity between existing plumes and seeps and springs, especially those on neighboring property, and the potential impacts of contaminated groundwater reaching the surface at these features. Adding a discussion of these parameters would provide a better understanding of whether groundwater on neighboring properties, such as the BBC, could be impacted.

In addition, the DEIS states that the soil remediation alternatives would not involve the withdrawal or injection of groundwater (DEIS pages S-50, 4-46, and 4-52). However, the DEIS also states that shallow groundwater may be encountered at Building 4024 and that dewatering may be required. If groundwater is shallow enough that it may be encountered when removing this building, it is possible groundwater could be encountered during soil removal elsewhere at the site. The DEIS should better substantiate the claim that groundwater would not be encountered during soil removal or analyze the potential impacts of encountering shallow

156-3

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156-4

156-3 DOE has performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). Chapter 3, Section 3.4, of this Final EIS was updated with information from this report. A new section, Chapter 3, Section 3.4.2, "Hydrogeologic Study Areas," has been added to the Final EIS which provides additional detail on the subsurface hydrology. Additional description of the nature and extent of contaminant plumes has been added to Chapter 3, Section 3.4.3 this Final EIS, as requested by the commenter. Groundwater discharge to surface water (seeps) is described in Chapter 3, Sections 3.3 and 3.4 of this EIS. The Draft RCRA report includes a discussion of the presence or absence of contaminants in seeps and artesian wells located downgradient of specific plumes. Only tritium has been detected in seeps and artesian wells (at a concentration of 1,271 picocuries per liter, well below the maximum contaminant level [EPA's tritium concentration limit in the Safe Drinking Water Act] of 20,000 picocuries per liter) in a seep located downgradient of the tritium plume. The Draft RCRA Report is included as a reference for this Final EIS and is available for review on DOE's website. Also, please refer to the Topic of Interest, "Offsite Impacts" (Section 2.7 of this CRD) for a discussion of this topic and DOE's response.

156-4 Chapter 4, Section 4.4.2 of this Final EIS, has been revised to clarify that the "shallow" groundwater potentially found at the Building 4024 basement is 40 feet below ground surface. The maximum depth of soil excavation is expected to be much less than 40 feet below ground surface and in many areas will be limited by the depth to bedrock, typically less than 5 feet below the surface, although soil depth in the Burro Flats area can be 5 to 10 feet and sometimes up to 20 feet thick (Chapter 3, Section 3.2.2 of this EIS). The maximum soil excavations are expected to be much less than 40 feet below ground surface. Therefore, proposed soil excavation would not be expected to come in contact with groundwater nor involve the withdrawal of groundwater. Appendix D, Section D.6.1 of this Final EIS, has been revised to state the range of depths used in determining soil volumes.

Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

groundwater on areas of the site. The DEIS could do this by providing an analysis of depth to groundwater in relation to soil excavation depths for each soil remediation alternative. Where groundwater could or would be encountered during soil removal, the DEIS should describe how that water, which could have concentrations of contaminants exceeding the MCLs, would be managed, tested, and disposed. Adding this information would provide information essential to understanding the amount of dewatering that could be associated with the soil remediation alternatives and the sampling, transport, and disposal activities that would be necessary to manage it. Any groundwater with concentrations of contaminants exceeding the MCLs could require off-site disposal, which could increase the number of truck trips associated with the project. This in turn could affect the DEIS' analysis of transportation and traffic and the amount of waste that would need to be managed.

156-4
cont'd

4.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

Based on the known extent of groundwater plumes, as depicted in the DEIS, it is unlikely that groundwater at the BBC is currently impacted. According to the DEIS, the soil remediation alternatives would have no adverse or minor beneficial impacts on groundwater and would not adversely impact groundwater on neighboring properties such as the BBC. However, as stated above, the DEIS should be edited to include a discussion of (1) plume stability and potential migration, (2) hydrologic connectivity between known plumes and off-site springs and seeps, and (3) potential for groundwater to be encountered during soil remediation and management of any groundwater encountered so that the potential impacts on groundwater at neighboring properties, including the BBC, can be more fully assessed.

156-5

156-5 See responses to comments 156-3 and 156-4.

5.0 SURFACE WATER

5.1 OVERVIEW

The ROI for Surface Water Resources (including stormwater) is defined as the existing surface water quality and hydrology of Area IV, the NBZ, and the ROI, which includes all drainages from Area IV and the NBZ as they extend off site and to their confluence with the larger downstream collectors, Bell Creek and Arroyo Simi. The analysis is focused on surface water quality and stormwater runoff quantity and velocity. No reference is made to other DEIS sections that provide overlapping or contributing analyses. Generally, the DEIS impact analysis sufficiently addresses surface water impacts caused by soil erosion and sediment loading, including those to stormwater. However, as discussed below, the DEIS lacks an adequate analysis of whether chemical and radiological contaminants may affect neighboring properties in the event of major flooding. This deficiency deprives the public of information necessary to assess the relative merits of the soil remediation alternatives. Also, Section 4.3 should restate the Chapter 2 finding that annual water use for each of the soil remediation alternatives would be within the capacity of the Calleguas Municipal Water District.

156-6

156-6 Under the Action Alternatives for soil remediation, DOE proposes to first remove soil that poses the greatest risk (soils containing contaminants above risk-based safety levels). Soil would be removed in a manner intended to control runoff and movement of contaminants onto the Brandeis-Barden property under normal weather events. The duration of this portion of the soil remediation would be roughly the same under all three Action Alternatives Removal of the remainder of the soil being remediation under each alternative would pose no appreciable risk to Brandeis-Barden. It is possible that an extreme weather event could result in rainfall that would exceed the capacity of the stormwater system and the SWPPP-mandated best management practices instituted during remediation. If this were to happen, the concentrations of any chemical or radiological constituents that may be carried by the water would be much less than they are in the soil on site. DOE considered the concentrations on site (below risk-based levels after remediation) and the dilution that would occur if they were transported off site and determined that a quantitative analysis is not warranted.

156-7

156-7 Chapter 4, Section 4.3 address impacts on the surface water within and adjacent to Area IV. The discussion of impacts on the water supply due to water use during soil remediation in Section 4.1 is a separate issue.

5.2 ANALYSIS OF ALTERNATIVES

The DEIS makes the correct findings that impacts on surface water and stormwater under this project are generally scalable by the amount of proposed surface area disturbance. The relative level of impact across the four alternatives (in descending order) is:

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- 1. AOC Alternative
- 2. Revised LUT Alternative
- 3. Conservation Alternative
- 4. No Action Alternative

The impact analysis is focused on the typical stormwater issues of soil erosion and sediment loading, but does not address potential chemical and radionuclide contamination of stormwater from the soils being disturbed. This issue did not appear to be addressed in the DEIS outside of the Surface Water section, so analysis and mitigation measures, as necessary, should be provided to address the potential waterborne transportation of these contaminants. In particular, if the level of chemical and radionuclide contaminants in stormwater would vary among the alternatives, due to the nature of the areas being disturbed, the analysis should explain any meaningful differences and potential mitigation measures. If any such impacts are identified, mitigation could include expanding the capacity of the retention ponds or adding retention facilities so that all stormwater can be captured on site until it can be tested and determined safe for release. Analysis and mitigation measures, as necessary, should also be provided to address the effects on downstream water bodies if the capacity of the NPDES stormwater control system is exceeded.

156-6
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Further, the DEIS figures do not indicate the locations of all surface water features referenced in the text, including Meier Canyon, Arroyo Simi, and Bell Creek, which makes it difficult for a reader to interpret the DEIS' analysis of impacts. At a minimum, arrows indicating the direction of stormwater flow for the drainages that extend off the Figure 3-15 map should be added.

156-8

156-8 Chapter 3, Figure 3-16 of this Final EIS was revised to incorporate the features identified in this comment.

5.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

The project site contains a stormwater control facility system that diverts stormwater away from the BBC. Absent any remediation activity at the SSFL, this water would ordinarily flow toward BBC and become incorporated into the natural ecosystem, and it is unclear whether the long-term impacts to BBC of the water diversion have been evaluated. Further, major flooding could overwhelm this system and cause untreated stormwater to flow toward the BBC. The DEIS identifies potential impacts due to the potential release of untreated stormwater resulting from exceedance of the capacity of the existing National Pollutant Discharge Elimination System (NPDES) stormwater control facilities. During soil remedial activities, the BBC could be affected both by the physical impacts of flooding due to increased stormwater flow that exceeds the capacity of the existing NPDES stormwater control facilities, as well as by the chemical and radionuclide contaminants that could be transported by that stormwater. The extent of the impacts caused by the latter issue cannot be determined based on the information provided in the DEIS, but there is no question that impacts which may be caused by chemical and radionuclide contaminants would be exacerbated by a more intense cleanup such as the AOC Alternative. The significantly longer duration of the AOC Alternative relative to the other alternatives also increases the likelihood of such an event. It is critical that analysis of these potential impacts be included in the DEIS. Each of these issues needs to be discussed and assessed in the Final EIS.

156-6
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In its Record of Decision, DOE should commit to implementation of Mitigation Measures SW-1 and SW-2, which would reduce the amount of soil transported in stormwater and implement additional measures if the capacity of the stormwater control system is exceeded, to reduce the potential for the physical impacts of flooding and the impacts from chemical and radionuclide contaminants present within stormwater at the BBC. Additionally, to better address potential

156-9

156-9 Mitigation Measures SW-1 and SW-2 were reviewed in preparing this Final EIS and both were modified (SW_2 was modified as suggested by the commenter) (see Chapter 6, Table 6-2). As discussed in Chapter 1, Section 1.7, of the EIS, DOE's decision pursuant to the analysis in this Final EIS will be announced in a Record of Decision(s) (ROD[s]) that will be issued no sooner than 30 days after the EPA Notice of Availability of this Final EIS is published in the *Federal Register*. DOE would prepare and implement a mitigation action plan for those mitigation commitments made in the ROD.

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occurrences under the project, Mitigation Measure SW-2 should be modified to indicate that measures “would be added” and to add actual exceedance of the NPDES stormwater control system design capacity as another trigger for adding those measures or developing and implementing additional measures.

156-9
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6.0 TRANSPORTATION AND TRAFFIC

6.1 OVERVIEW

The DEIS’ analysis of transportation and traffic includes an assessment of project-generated traffic and its impact on traffic conditions on area roads; exposure to radiation from transport of radioactive waste and potential accidents involving a release of radioactive waste; risk of traffic accidents and fatalities; and effects on pavement condition. Transportation and traffic impacts would occur over 10 years under the AOC Alternative and around 2 years under the Revised LUT and Conservation Alternatives. While the scope of the transportation and traffic analysis is commensurate with industry practice, the DEIS analysis underestimates impacts due to the way significance is defined. The analysis would more meaningfully assess potential impacts if a volume-to-capacity analysis is added, as described below.

156-10

6.2 ANALYSIS OF ALTERNATIVES

As presented in the DEIS, implementing any of the soil remediation alternatives would result in adverse traffic impacts. The relative level of impact across the four alternatives (in descending order) is:

- AOC Alternative: substantial adverse impact
- Revised LUT Alternative: moderate adverse impact
- Conservation Alternative: moderate adverse impact
- No Action Alternative: no adverse impact

Table 1 presents the impacts of the soil remediation alternatives. The no action alternative would have no impacts above baseline conditions and therefore is not shown in Table 1.

Among the soil remediation alternatives, the greatest adverse impact is caused by the AOC Alternative. As shown in Table 1, the number of truck trips associated with the AOC Alternative is almost five times that of the Revised LUT and Conservation Alternatives and the number of rail trips is more than six times that of the other soil remediation alternatives.

The annual number of worker commute trips would be approximately the same under all of the soil remediation alternatives; however, the trips would continue for ten years under the AOC Alternative but would cease after about two years under Revised LUT or Conservation Alternatives. The total number of work commute trips would be about five times more under the AOC Alternative compared with the Revised LUT and Conservation Alternatives.

Traffic on Woolsey Canyon Road would increase up to 7.3 percent, and the LOS would degrade from B to C for 9 years under the AOC Alternative and for approximately 2 years under the Revised LUT or Conservation Alternatives. Lines of traffic could form behind slow-moving trucks, causing frustrated motorists to pass in unsafe conditions. All project-generated traffic

156-10 As reported in Chapter 4, Section 4.8.2, and Appendix H, Section H-13 for traffic potentially attributable to DOE activities, for the final EIS DOE performed a detailed analysis of traffic flow quality for selected SSFL-area intersections and road segments considering operational factors such as control delay, LOS, and V/C ratios. In Chapter 5, Section 5.5.8.2, of the final EIS, DOE a performed a similar analysis to analyze cumulative traffic impacts assuming 96 daily heavy-duty truck round trips by DOE, NASA, and Boeing. Section 4.8.2, Section H.13, and Section 5.5.8.2 of the Final EIS were revised to document the changes in LOS ratings and V/C ratios that could potentially occur on affected road segments in the SSFL vicinity. The potential changes in V/C ratios were assessed against the thresholds for impact significance as listed in the L.A. CEQA Thresholds Guide (LA 2006). Also refer to the response to comment 146-78.

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would enter and exit through the gate at the northeast corner of the SSFL and disperse from there onto roads that are generally north and east of the SSFL.

As shown in Table 1, the AOC Alternative would result in a higher number of traffic accidents and fatalities (up to 3 fatalities), while the other soil remediation alternative are not expected to result in any fatalities. According to the numbers in the DEIS, more deaths would occur from traffic accidents under the AOC Alternative than would result from exposure to contaminants in soil under any of the alternatives, including the no action alternative.

All of the soil remediation alternatives would result in a traffic safety risk because trucks turning right onto Valley Circle Boulevard from Woolsey Canyon Road may enter the oncoming lane.

The AOC Alternative would also have approximately four to five times the adverse impact on pavement condition compared to the other soil remediation alternatives, causing pavement repairs to be needed sooner. Radiation exposure and the risk of latent cancer fatalities (LCF) would be very small under all of the alternatives.

Table 1. Impacts of Soil Remediation Alternatives on Traffic and Transportation

	AOC Alternative	Revised LUT Alternative	Conservation Alternative
Radioactive waste shipment – truck	<ul style="list-style-type: none"> 6,830 truck trips 0 LCF 0 (up to 0.3) fatalities 	<ul style="list-style-type: none"> 6,830 truck trips 0 LCF 0 (up to 0.3) fatalities 	<ul style="list-style-type: none"> 3,530 truck trips 0 LCF 0 (up to 0.1) fatalities
Radioactive waste shipment – truck/rail	<ul style="list-style-type: none"> 6,830 trucks 430 rail 0 LCF 0 (0.2) fatalities 	<ul style="list-style-type: none"> 6,830 trucks 430 rail 0 LCF 0 (0.2) fatalities 	<ul style="list-style-type: none"> 3,530 trucks 220 rail 0 LCF 0 (0.1) fatalities
Shipment of nonradioactive waste, etc. – truck	<ul style="list-style-type: none"> 110,000 truck trips 1 (0.52) fatality 	<ul style="list-style-type: none"> 17,000 truck trips 0 (0.25) fatalities 	<ul style="list-style-type: none"> 14,900 truck trips 0 (0.25) fatalities
Shipment of nonradioactive waste, etc. – truck/rail	<ul style="list-style-type: none"> 108,700 trucks 3,900 rail 3 (2.6) fatalities 	<ul style="list-style-type: none"> 17,020 trucks 470 rail 0 (0.32) fatalities 	<ul style="list-style-type: none"> 14,870 trucks 470 rail 0 (0.31) fatalities
Maximum total truck trips	116,830	23,500	18,430
Maximum total rail trips	4,330	900	690
Worker trips	62,500 over 10 years	13,000 over about 2 years	12,500 over about 2 years
Traffic increases (primarily affecting Woolsey Canyon Road)	LOS degradation and traffic increase up to 7.3% for 9 years	LOS degradation and traffic increase up to 7.3% for around 2 years	LOS degradation and traffic increase up to 7.3% for around 2 years
ESALs (pavement condition)	200,000	51,000	40,000

Notes:
 % Percent
 AOC Administrative Order on Consent
 ESAL Equivalent single-axle load
 LOS Level of service
 LCF Latent cancer fatalities
 LUT Look-up table

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The DEIS likely underestimates traffic impacts due to the way the impact thresholds are defined. The DEIS impact threshold related to roadway performance is “change the LOS rating on an evaluated traffic route” (DEIS page 4-128). Using this criterion, only one substantial impact is identified. However, most of the roadways affected by project traffic are currently operating at LOS D or below. Use of the LOS system to identify impacts to such underperforming roadways can mask traffic impacts that are not severe enough to change the LOS grade, but are nevertheless significant. Accordingly, use of a more granular traffic impact analysis, such as volume to capacity ratio (V/C), is warranted in order to more transparently assess impacts from project-generated traffic. Given the much greater number of truck trips, and the significantly longer period of time in which trucks would be making trips to and from the site, those impacts are likely to be most substantial under the AOC Alternative.

The DEIS states that in the event of an accident involving a radiological release, local emergency personnel would likely be the first responders to arrive on the scene (DEIS page 4-100). The analysis seems to assume that all local first responders along the routes (which could span hundreds of miles and pass through numerous communities) would have sufficient training to respond to such an incident. The DEIS should include a more in-depth analysis and, if appropriate, best management practices (BMP) and/or mitigation measures to ensure local emergency personnel along the route are informed that radioactive waste would be shipped through their jurisdiction and have an opportunity to augment their training, if needed, so they would be fully prepared to respond should this type of accident occur. The DEIS states that in the event of an accident involving a radiological release, persons living within 50 miles could be exposed (DEIS page 4-101).

6.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

The BBC attracts campers and visitors who travel to the BBC on roads affected by project-generated traffic, and who would therefore be exposed to the risks created by project-generated traffic that are summarized in Section 6.2. These risks include possible traffic fatalities under the AOC Alternative. Other risks include possible exposure in the event of an accident involving a radiological release, as the BBC is within 50 miles of areas where such an accident could occur. BBC visitors traveling Woolsey Canyon Road, Valley Circle Boulevard, and other roads affected by project-generated traffic would be exposed to traffic delays due to increased amounts of traffic and deteriorated pavement condition, which can cause flat tires and other incidents. BBC visitors traveling Woolsey Canyon Road would also be impacted by degradation of LOS, slow-moving vehicles, and to unsafe turning movements at the intersection with Valley Circle Boulevard.

To reduce traffic impacts affecting the BBC and the community in general, DOE should commit to implementation of Mitigation Measures TR-1, TR-2, and SE-1 in its Record of Decision. TR-1, which would distribute truck traffic on multiple routes, would minimize traffic delays. TR-2 would improve the safety of truck turning movements from Woolsey Canyon Road onto Valley Circle Boulevard, and SE-1 would contribute funds for timely pavement repair. DOE is further encouraged to identify and adopt additional mitigation measures to minimize transportation impacts.

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156-11 Chapter 4, Section 4.8.1, of this EIS describes the important characteristics of the SSFL wastes, the locations of offsite disposal facilities, and the rules and regulations governing the transports of radioactive materials. The regulations include those issued by the U.S. Department of the Transportation (DOT), in 49 CFR Part 173, governing the transport and packaging of radioactive wastes and emergency response guidelines, and applicable U.S. Department of the Homeland Security regulations on the management of the nuclear and radiological incidents. More detailed information on the applicable regulations is provided in Appendix H, Sections H.3 and H.4, of this EIS. This EIS states that, because of the very low concentrations of radioactive material contained in the contaminated soils, building debris, and other waste addressed in this EIS, transport of radioactive waste from site cleanup would pose a very small risk to human health and the environment, even under accident conditions that result in, the spill of an entire truck shipment (about 23 tons) of contaminated soil. Nonetheless, the radioactive materials would be transported with appropriate placards and labeling. Because of the abundance of these types of shipments on the roads, State highway and local patrols and first responders are familiar with these types of shipment and are knowledgeable about appropriate responses. The risk associated with any spillage or dispersal of the SSFL wastes is considered very low. As shown in Table 4-48 of the EIS, there would be less than a 4×10^{-9} (1 chance in 250 million) of an LCF among the population within 50 miles of the transportation route.

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156-12 Chapter 6 of the EIS identifies several transportation and traffic mitigation measures that DOE is considering. As discussed in Chapter 1, Section 1.7, of the EIS, DOE's decision pursuant to the analysis in this Final EIS will be announced in a ROD(s) that will be issued no sooner than 30 days after the EPA Notice of Availability of this Final EIS is published in the *Federal Register*. In accordance with DOE regulations (10 CFR 1021.331), DOE would prepare and implement a mitigation action plan for those mitigation commitments made in the ROD(s).

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7.0 AIR QUALITY/DUST

7.1 OVERVIEW

The DEIS' air quality analysis is presented in two ways. First, the DEIS contains a discussion of the total air emissions that would result from each soil, building demolition, and water treatment alternative. This discussion is straightforward, but the DEIS would benefit from a more comprehensive analysis of the comparison among the different remediation alternatives.

Second, air quality is discussed in terms of the estimated annual and daily air emissions. This analysis is relevant as air regulations and thresholds are set in these terms. Air quality in the region is regulated and monitored as three domains (Ventura County, South Coast Air Basin, and Outside Ventura County/South Coast Air Basin), and peak annual and daily emissions are presented for each domain. The DEIS discusses the estimated annual and daily air concentrations from combinations of the soil, groundwater, and building clean-up activities using a range for the soil remediation alternatives, since the soil and groundwater remediation and building demolition activities would be occurring at the same time, each contributing to the overall levels of contaminants in the air at any given time. Looking at the emissions in this manner is the way the regulators consider air emissions and is helpful for purposes of comparing emissions with regulatory thresholds and standards. However, the DEIS should also discuss the estimated annual and daily air emissions from each soil remediation alternative by itself in order to present a simpler comparison for the public.

The potential for airborne radiological particulates and for the spread of *Coccidioidomycosis* spores (i.e., San Joaquin Valley Fever or Valley Fever) is discussed in Section 12 ("Human Health").

The potential human health impacts associated with radionuclides from dust emissions during remediation work were only discussed for remediation workers. There is no discussion of the potential human health impacts to the members of the public surrounding the site associated with radionuclides from dust emissions during the remediation activities. The human health impacts to the public associated with airborne radionuclides were discussed for hypothetical scenarios only after the completion of the remediation work (for onsite residents and recreational users).

As discussed below, additional information is necessary for the DOE and the public to understand and evaluate the comparative air related impacts associated with each alternative.

7.2 ANALYSIS OF ALTERNATIVES

Total Air Emissions

Table 2 presents the total air emissions to be expected from the soil removal alternatives, as presented in the DEIS. These totals are independent of the amount of time it would take to complete the clean-up activities under each alternative or the specific amount of annual or daily emissions to be expected.

The DEIS presents the total air emissions for each soil remediation alternative, but a comparative discussion would be more helpful to the public. For example, Table 2 helps put the total emissions in better perspective by positioning the Conservation Alternative as a baseline, and

156-13

156-13 Regarding the scheduling of each proposed alternative, Chapter 2, Sections 2.3.2, 2.4.1, and 2.4.2 of this Final EIS identify how many years it would take to complete the proposed soil remediation alternatives. Also, Table 2-6 in Section 2.4.4 of this Final EIS presents the annual number of truck trips for each remediation alternative over the projected duration of the cleanup activities. (After consideration of budget and operational constraints, DOE has incorporated a more realistic estimate of an average of 16 truck round trips per day on Woolsey Canyon Road.) Chapter 4, Sections 4.6.1.2, 4.6.1.3, and 4.6.1.4, of this Final EIS also identify how many years it would take to complete each soil remediation alternative. To provide more clarity on the magnitudes and durations of emissions estimated for each soil remediation alternative, Final EIS Section 4.6.1 presents estimates of peak annual emissions for each action alternative and discusses the factors that affect the emissions, such as miles driven by haul trucks between SSFL and proposed disposal facilities.

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Schedules of activities used to estimate emissions in this Final EIS for the four combinations of action alternatives are presented in the following document - *EIS for Remediation of Area IV and the NBZ of the SSFL – Final Air Emissions Calculation Methods* (Leidos 2018b). Annual scheduling factors are presented in the first table of Attachments 1.A, 1.B, 1.CRez, and 1.C-OS. This document is available on the project website at <https://www.ssflareaiveis.com> at the following location: click on "References", then click on the "References for Chapters 1 through 8", and then scroll down the page and this document is available as Leidos 2018b.

156-14

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts, including adding an offsite human health impact assessment by modeling potential releases of windblown dust to a variety of offsite receptors. The Draft EIS qualitatively discussed risks from coccidioidomycosis, also known as Valley Fever. Little data exist to quantify the effects of construction activities on the local epidemiology of coccidioidomycosis. Therefore, a quantitative assessment of the risks associated with coccidioidomycosis is not possible. However, additional qualitative discussion of the risks of Valley Fever was added to this Final EIS, including some limited quantitative study results.

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comparing the AOC and Revised LUT Alternatives' emissions to those of the Conservation Alternative. While the Revised LUT Alternative would increase air emissions relative to the Conservation Alternative, the AOC Alternative's emissions are much higher, resulting in a 342 to 813% increase. The range of impacts that would result from such a substantial increase needs to be described and analyzed.

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Table 2. Impacts of Soil Remediation Alternatives on Air Quality

	VOC	CO	NO _x	SO ₂	PM ₁₀	PM _{2.5}	CO ₂
AOC Alternative – Percentage increase over Conservation Alternative							
Total Nearby Disposal Site	464%	500%	382%	375%	813%	615%	364%
Total Distant Disposal Site	375%	431%	360%	342%	765%	580%	350%
Revised LUT Alternative – Percentage increase over Conservation Alternative							
Total Nearby Disposal Site	143%	140%	150%	150%	122%	122%	156%
Total Distant Disposal Site	134%	138%	140%	135%	121%	125%	138%
Conservation Alternative (tons)							
Total Nearby Disposal Site	1.4	7.0	34	0.08	32	7.8	7,700
Total Distant Disposal Site	3.2	13	100	0.26	34	8.8	24,000

Notes:

- % Percent
- CO Carbon monoxide
- CO₂ Carbon dioxide
- NO_x Nitrogen oxides
- PM_{2.5} Particulate matter with a diameter of 2.5 microns or less
- PM₁₀ Particulate matter with a diameter of 10 microns or less
- SO₂ Sulfur dioxide
- VOC Volatile organic compound

Annual and Daily Air Emissions

Air regulations are written to address concentrations of constituent in the air and to restrict the amount that can be emitted on an annual and daily basis. The discussion of annual and daily emission thresholds in the DEIS is adequate when comparing the potential remediation activity at the site to regulatory thresholds. However, the DEIS does not discuss the emissions in a way that allows the lay reader to evaluate and compare the annual and daily emissions from the different soil remediation alternatives and the resulting potential impacts to the public because these emissions are conflated with those of other remediation activities.

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Annual and daily emission thresholds apply to the amount of pollutants to be emitted into the air during specific time periods. These thresholds apply to the total amount of pollutants being emitted into the air during that time period regardless of the amount emitted by individual actions/sources. For example, the emissions from the soil removal activities and the groundwater remediation activities could each be below the threshold when looked at individually, but taken together, they could result in an exceedance of a threshold. Since the different remedial actions could take place at the same time, the DEIS discusses peak annual and daily emissions for each air domain in terms of different combinations of the clean-up activities. This approach allows for discussion of the potential remediation actions in terms of the regulatory thresholds.

However, that discussion alone does not present enough information to the reader to evaluate the difference in daily and annual emissions from the individual soil remediation alternatives. In Tables 4-34 and 4-35 of the DEIS, the annual and daily air emissions from the soil remediation

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activities are presented as a range without identifying the amounts from the individual soil remediation alternatives. Since the DEIS fails to describe the schedule and intensity for these various remediation activities, it is not made clear to a layman that while the Cleanup to AOC LUT Values alternative has the greatest total air emission, it would have less daily and annual emissions due to the work being spread out over ten years. Without the potential schedule of activities, the discussion of potential impacts of the activities could be misleading.

The DEIS should include a more thorough discussion of how the estimated annual emission rates for the different remediation alternatives relate to the intensity of the remediation activities. For example, it should be made more apparent to the reader that while the AOC Alternative has the greatest total amount of nitrogen oxides (360 tons), it would have a lower annual emission rate due to taking place over 10 years (an average of 36 tons/year), compared to the Revised LUT Alternative with a lower total of nitrogen oxides (140 tons) but a higher average annual emission rate (70 tons/year).

Currently, the DEIS assumes that if the estimated peak annual and peak daily air emissions from the actions in the alternatives would not exceed regulatory thresholds then there are no adverse impacts to health or the environment. Yet, when it is estimated that annual peak emission thresholds for nitrogen oxides would be exceeded, there is no discussion of the potential health impacts, only a statement that the conditions would occur intermittently. If the regulatory threshold is the criteria for no health impacts, the DEIS should discuss the health impacts of any exceedance of the thresholds.

This information should be presented simply in the DEIS and be expanded into the difference in health impacts on various receptors from higher emissions over a shorter time frame versus lower emissions over a longer time frame.

Particulates

The DEIS states that the dust emissions from the remediation activities would be below applicable air quality thresholds. However, those thresholds are for health impacts resulting only from the physical form of the particulates. They do not consider that dust from the remediation activities may include chemical and radionuclide constituents. The DEIS does not discuss the chemical- and radiation-related health impacts from the dust emissions (both direct inhalation and exposure pathways to dust that has settled on surfaces).

In the discussion of impacts to remediation workers, the DEIS states: "Considering the risks from exposure to chemicals and radionuclides in soil that are projected for an onsite suburban resident, it is expected that the risks to workers involved in soil remediation would be very small and were not estimated." This is an erroneous comparison. The DEIS states that the assumption for calculating the risk to the onsite suburban resident was that the resident would be present *after* the completion of the remediation work. The workers would be exposed to the radionuclide levels *before and during* remediation activities. The comparison is not logical and should be reassessed to ensure the DEIS adequately considers workers' safety.

Moreover, the DEIS does not discuss the impacts to the potential public receptors *during* the remediation activities. The decision being assessed in the DEIS is not only whether to do the remediation activities (i.e., No Action versus Action), but how to accomplish the activities (i.e.,

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156-15 The qualification of "no adverse impacts" mentioned in the comment is not used in the air quality analysis of this Final EIS, as any increase in exposure to an air pollutant could potentially be adverse. In addition, the regulatory thresholds used in the analysis do not identify levels below which no human health impacts would occur, but rather are indicators for the potential of pollutants to contribute to an exceedance of an ambient air quality standard if they exceed the thresholds. This is the crux of the air quality analysis, as mentioned in the Impacts Analysis section of Chapter 4, Section 4.6, of this Final EIS. In this Final EIS, DOE (after consideration of budget and operational constraints) has incorporated a more realistic estimate of 16 truck round trips per day on Woolsey Canyon Road. The impacts of this reduction in truck traffic have been incorporated into the analysis of all four of the soil remediation action alternatives. This Final FEIS demonstrates that by complying with applicable rules and regulations, emissions from proposed sources would not exceed any applicable emission threshold and therefore would not contribute to an exceedance of any ambient air quality standard. Therefore, further discussion of potential human health impacts as requested in the comment, is unnecessary.

156-16 Under all action alternatives, workers would be protected in accordance with DOE regulations (e.g., 10 CFR Parts 835 and 851) and DOE Orders. Worker radiation protection practices would be employed so that doses are as low as reasonably achievable. The onsite resident exposures that are being compared to the worker exposures were the onsite resident exposures for the No Action Alternative (current conditions). The amount of contamination and the pathways of exposure would be the same for an onsite resident (under the No Action Alternative) and a worker under all of the action alternatives but the worker exposure time would be significantly less. As discussed in Chapter 4, Section 4.9 of the Draft EIS, the risks that may be received by an onsite suburban resident are only slightly different from those that may be received from exposure to soil containing background quantities of chemicals and radionuclides (background soil). This would also be true for remediation workers. While the disturbance of soil under the soil remediation action alternatives could result in the suspension of chemical or radioactive constituents in larger quantities for soil removal than that from the activities of an onsite suburban resident. DOE worker safety/radiation protection requirements would address the additional safety concerns faced by workers and would f control worker exposure.

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which action alternative). Providing the current public health risk information (No Action) and the risk after the clean-up activities does not allow for comparison of the remediation action alternatives. The DEIS should include discussion of the health impacts from the chemical and radionuclide constituents in the dust to workers and the public in a way that the lay reader can compare and contrast the impacts from the different remediation alternatives.

7.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

The DEIS estimates that peak annual and peak daily air emissions would not exceed regulatory thresholds within Ventura County, so there should be no air quality exceedances at the BBC under any of the alternatives (or combination of alternative soil clean-up, groundwater treatment, or building demolition actions). Nevertheless, any of the three cleanup alternatives would emit airborne pollutants into the local environment, leaving a lower threshold for exceedances from emissions from other sources. Such impacts are greatest for the short term under the "Cleanup to Revised LUT Values, Building Removal, and Groundwater Treatment" combination of alternatives, which would emit greater annual and daily quantities of air pollutants, and last the longest under the "Cleanup to AOC LUT Values, Building Removal, and Groundwater Treatment Alternatives" combination of alternatives

Increasing annual and daily air emissions are related to increased incidences of respiratory diseases, and increased aggravation of asthma and other respiratory diseases in persons who already have these conditions. The DEIS should discuss the impacts to nearby sensitive receptors.

In addition, the dust from the remediation activities would include some chemical and radionuclide constituents. Due to its proximity to SSFL, the BBC would receive some of these dust emissions. Because they are not assessed in the DEIS, the chemical- and radiation-related health impacts of dust inhalation and other pathways cannot be determined; however, such impacts would be mitigated by the selection of the Revised LUT or Conservation Alternatives, either of which will generate significantly less total dust than the AOC Alternative. These chemical- and radiation-related health impacts of dust inhalation also should be addressed (both direct inhalation and exposure pathways to dust that has settled on surfaces). These impacts are discussed more thoroughly in Section 12, below.

In its Record of Decision, DOE should commit to implementation of Mitigation Measure AQ-1 to use a greener clean-up fleet of off-road vehicles and on-road trucks, which would reduce overall project impacts on air quality and potential impacts to the BBC by reducing the annual and daily emissions of volatile organic compounds, carbon monoxide, and nitrogen oxides.

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156-17

156-17 In response to public comments, DOE has added quantitative evaluations for an onsite recreational user, and offsite resident health impacts from the chemical and radionuclide constituents in the dust for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS.

156-18

156-18 This Final EIS includes analyses of the potential for emissions from the proposed cleanup activities to impact sensitive receptors within each analysis domain; sensitive receptors would not be exposed to substantial pollutant concentrations. (Please see Chapter 4, Sections, 4.6.4.1, 4.6.4.2, and 4.6.4.3 of this Final EIS)

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156-19

156-19 Comment noted. This Final EIS incorporates a variation of Draft EIS Mitigation Measure AQ-1 as a goal to mitigate emissions from the proposed usages of off-road equipment and on-road trucks. DOE revised the wording of this initiative in this Final EIS to more clearly state the goal that individual on-road trucks within the project fleet would be no more than 5 years old during each year of cleanup activities. As discussed in Chapter 1, Section 1.7, of the EIS, DOE's decision pursuant to the analysis in this Final EIS will be announced in a ROD(s) that will be issued no sooner than 30 days after the EPA Notice of Availability of this Final EIS is published in the *Federal Register*, DOE would prepare and implement a mitigation action plan for those mitigation commitments made in the ROD(s).

**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

8.0 INFRASTRUCTURE

8.1 OVERVIEW

Project-related water needs for onsite remediation (e.g., dust control, backfill compaction, and source removal) would be obtained from the Calleguas Municipal Water District (CMWD). All water used for these purposes would be potable. The use of potable water to accomplish remediation goals may adversely affect the community by forcing other water users to implement measures to achieve water conservation goals driven by the ongoing drought in Southern California. This is particularly so under the AOC Alternative, which uses approximately five times as much potable water as the other two soil remediation alternatives. The DEIS, however, does not address this potential impact.

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This Final EIS provides estimates of the current and projected imported and local water supply for CMWD (see Chapter 3, Section 3.1.1.2) and compares the water use for the alternatives against this water supply. The local water supply estimate used does not include the effect that the proposed 25 percent statewide and 20 percent CMWD reduction in water use would have on the water supply requirements. In this Final EIS, DOE has included recent information on demand for water from the Calleguas Municipal Water District.

8.2 ANALYSIS OF ALTERNATIVES

Water use for these activities is estimated to be 16,000 gallons of water per day for 250 days per year, an annual water use of about 4 million gallons (about 12 acre-feet). This use rate is consistent across the soil remediation alternatives. The total water use for each soil remediation alternative is therefore a function of the time it would take to complete the remediation:

- AOC Alternative: 10 years, 40 million gallons
- Revised LUT Alternative: slightly more than 2 years, 8.3 million gallons
- Conservation Alternative: 2 years, 8 million gallons

Water use under the soil remediation alternatives potentially could be reduced through measures such as surfactant application to assist in dust control.

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The DEIS discusses the impacts of water use in terms of CMWD's system capacity and states that the water needed for the remediation activities is within the system capacity, but the DEIS should also discuss the amount of water demand from the remediation activities in terms of the current annual level of water use in the CMWD. This would allow for more context to ascertain the significance of the water required for the SSFL remediation. CMWD has set a goal of 20 percent annual use reduction in response to drought conditions in the state.¹ Each of the cleanup alternatives will increase demand on the system and shift responsibility to other CMWD customers to achieve the target reduction. However, without current CMWD water demand information, the DEIS does not give the community an opportunity to assess the extent to which that additional responsibility will fall on them.

8.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

While the water required to conduct any of the cleanup alternatives does not directly affect AJU, water use is an important consideration for the community and the state as a whole due to California's current drought conditions and the need, as expressed by California and CMWD officials, to significantly reduce water consumption. With the remediation activities increasing the demand for water, efforts to reduce the area's water consumption will fall more heavily on other local users. For AJU, forced conservation measures could result in higher water prices and/or a deprivation of water for other non-essential purposes, such as irrigating and maintaining

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¹ Calleguas Municipal Water District, Board of Directors Resolution No. 1845, July 2, 2014.

Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

the BBC grounds. Other CMWD customers may experience similar adverse impacts with respect to their usage of water.

9.0 AESTHETICS AND VISUAL RESOURCES

9.1 OVERVIEW

Aesthetics and visual resources are addressed in the Land Resources sections of the DEIS (Sections 3.1 and 4.1). The SSFL and surrounding vicinity is a relatively undeveloped area within a large highly urbanized area that contains unique rock outcroppings and semi-arid vegetation. The analysis of aesthetics and visual resources includes an assessment of project impacts on scenic vistas, scenic resources (such as trees, rocks, and historic buildings), visual character of the area, and light and glare.

The DEIS does not adequately assess visual impacts caused by the remediation for several reasons detailed below. Among other things, the DEIS only analyzes viewshed impacts from within the SSFL; it does not consider how the remediation alternatives will impact views from neighboring properties, including from the BBC. The DEIS also states that long-term visual impacts will be minimal or non-existent under the AOC Alternative, but that conclusion is based on an assumption that is contradicted elsewhere in the document. The DEIS also does not adequately consider long-term aesthetic impacts in the event that an adequate volume of backfill meeting LUT soil quality requirements is not available to replace the 933,000 cubic yards that would be removed under the AOC Alternative. These analytical flaws suggest that visual impacts are likely to be more adverse than they are presented in the DEIS.

9.2 ANALYSIS OF ALTERNATIVES

The DEIS states that the principal difference among the soil remediation alternatives is that visual quality would be impaired for 10 years under the AOC Alternative compared with approximately 2 years under the Revised LUT or Conservation Alternatives. The relative level of impact across the four soil remediation alternatives (in descending order) is:

1. AOC Alternative: moderate adverse impact
2. Revised LUT Alternative: minor adverse impact
3. Conservation Alternative: minor adverse impact
4. No Action Alternative: no adverse impact

The DEIS is missing several important analyses, each of which would show the magnitude of impacts of the AOC Alternative to be even greater than is currently stated in the DEIS.

First, the DEIS uses an impact threshold of altering scenic resources "alongside a state scenic highway" and then dismisses this area from further analysis because the SSFL is not on a state scenic highway. This is not an appropriate impact threshold given the site's context, namely that it is situated within one of few relatively undeveloped areas in a vast urbanized area and is bordered by neighbors that value scenic resources, such as AJU and several surrounding parks and open space areas. The DEIS should be revised to alter this impact threshold to one that is suitable to the area's context and then conduct the impact analysis accordingly.

Second, the DEIS analyzes impacts on three viewpoints within the SSFL to determine impacts on scenic vistas. However, the SSFL is situated on a hill and is part of the viewshed of several

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156-21 The commenter is correct that the visual analysis does not evaluate potential impacts on the views from neighboring properties including areas such as the Brandeis-Barden property. The northern boundary of Area IV includes a ridge of bedrock that rises more than 1,900 feet above sea level. The main portion of Area IV subject to soil remediation is about 1,800 feet above sea level. This ridge affectively blocks any view of Area IV from the Brandeis-Barden property. Activities to remove soil from stream drainages in the NBZ may be visible from some locations on the Brandeis-Barden property, but would be confined to the lower laying stream drainage channels, would generally use smaller construction equipment, and would be of relatively short duration. The hill top forming the southern boundary of Area IV is partially visible from portions of Simi Valley north of Los Angeles Boulevard. But given the hill is endangered species habitat and therefore within an area in which the exemption process would be applied, soil remediation would consist of a focused removal of soils containing contaminants above risk-based levels for the hill side.

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156-22 As noted in the response to comment 156-21, Area IV is shielded from view from Brandeis-Barden property by a tall sandstone ridge. Nonetheless, the comment is accurate for Area IV onsite views; the biological resources section does state that areas with native vegetation including woodlands may never fully recover thus impacting the future onsite views. The visual quality section in this Final EIS was revised to incorporate the impact of a failure of the native vegetation to fully recover and to be more consistent with the conclusions of the biological resources analysis.

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156-23 The volume of backfill soil DOE estimates is required under the Cleanup to AOC LUT Values Alternative to replace the 881,000 cubic yards removed is 660,000 cubic yards. DOE does not intend to initiate removal of soil in Area IV without an adequate source of backfill identified. A source of backfill will be identified in the Soil Remedial Action Implementation Plan that must be approved by the DTSC prior to initiation of soil remediation activities. Therefore, the environmental impacts mentioned in the comment would not occur. Please refer to Section 2.3, "Suitable Backfill Soil," of this CRD for further discussion.

156-24 Note that the criterion related to being alongside a State scenic highway is one of four criteria identified in this EIS for evaluating aesthetics and visual quality. Other criteria include causing substantial adverse impacts on a scenic vista and degrading the existing

**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

neighboring properties to which scenic vistas are important, including the BBC and several surrounding parks and open space areas. The DEIS should be revised to include a viewshed analysis from these properties.

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Third, the DEIS states that while short-term impacts would be adverse, long-term impacts would be beneficial because the affected area would be returned "to a stabilized, revegetated state." However, the DEIS' biological resources section states that areas with native vegetation, including woodlands, may never fully recover. This could occur under any of the soil remediation alternatives; however, it is most likely and could be most pronounced under the AOC Alternative since that alternative would involve the greatest amount of habitat disturbance. The DEIS should be revised to examine the long-term adverse impacts on aesthetics and visual resources in relation to impacts on vegetation and native habitat.

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Finally, the DEIS also does not adequately consider the long-term aesthetic impacts in the event that an adequate volume of backfill meeting AOC LUT soil quality requirements is not available to replace the 933,000 cubic yards that would be removed under the AOC Alternative. If an adequate volume of soil cannot be sourced, the remediation would potentially leave the SSFL with unsightly pockmarks or unusual gradations that would adversely impact the area's aesthetics. The DEIS should be revised to state how the site would be restored if an adequate volume of backfill meeting AOC LUT requirements cannot be found and analyze related impacts not only on aesthetics and visual resources, but also on biological resources and soils.

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9.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

The BBC has views of the surrounding area, including the SSFL. These views, which give the observer the feeling of being in a relatively undisturbed landscape, are part of the appeal of outdoor recreation at the BBC, and as such are an important scenic resource to surrounding property owners. These views would be adversely impacted during the AOC Alternative's 10-year project period, when project-related equipment and activities would be visible from the BBC.

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These important scenic resources would also be impacted after the end of the project period. As stated in the DEIS, up to 130 acres of vegetation and wildlife habitat outside of the exemption areas, including up to 51 acres of relatively undisturbed native habitat, would be affected under the AOC Alternative. Additional vegetation and habitat inside the 101 acres of proposed exemption areas could also be affected under the AOC Alternative. The acreage impacted under the Revised LUT or Conservation Alternatives would be approximately half to one-quarter of that for the AOC Alternative. As explained in the DEIS, it "may not be possible to restore native vegetation" (DEIS page 4-58) in some areas. Therefore, adverse impacts on scenic views from the BBC and the associated perception of recreating in a relatively undisturbed area would be permanently adversely impacted because views of areas where native vegetation was removed would not be as pleasing or as congruous with the surrounding environment after project completion. This is particularly so in the event that an adequate volume of soil is not obtainable to meet the AOC's soil purity requirements, in which case the SSFL would presumably remain unfilled or pock-marked.

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visual character or quality of the site and surroundings. The visual resource threshold is based on how and where the site can be viewed by the general public. This Final EIS was revised to acknowledge a greater disruption of the aesthetics during and immediately following remediation. However, it is assumed that restoration efforts would be reasonably successful in restoring the visual character of the site to its pre-remediation condition. Long-term impacts to aesthetics may be somewhat degraded by the removal of buildings, but the aesthetics would be consistent with an "open space" future land use and improved over current conditions.

**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

10.0 GEOLOGY AND SOILS

10.1 OVERVIEW

Some of the soils at the SSFL contain chemicals and radioactive materials. The levels of contamination were determined through site sampling in accordance with regulatory agency requirements. Among the chemicals most frequently observed in soils at concentrations exceeding AOC LUT values were polychlorinated biphenyls, polycyclic aromatic hydrocarbons, dioxins, petroleum chemicals, mercury, and metals (antimony, cadmium, chromium VI, mercury, selenium, and silver).

Because there were no established LUT values for radionuclides, field action levels consisting of either the background values for radionuclides or the specific confidence level minimum detection concentration were used, as applicable. Cesium-137 and strontium-90, and to a lesser extent plutonium 239/240, were those most frequently observed above the field action levels. The field action levels were exceeded in 291 samples for cesium-137, 153 samples for strontium-90, and 14 samples for plutonium 239/240. Eight other site-related radionuclides equaled or exceeded their respective field action levels in 5 or fewer samples, with 3 radionuclides (tritium, nickel-59, and europium-154) equaling or exceeding the field action levels in only one sample each.

The estimated volume of soil containing chemical concentrations above AOC LUT concentrations is 1,410,000 cubic yards. The estimated volume of soil containing radionuclides above AOC LUT values is 91,000 cubic yards. About 97 percent (by volume) of soil containing radionuclides above AOC LUT values also contains chemicals above Revised LUT values.

Relative to the other alternatives, the AOC Alternative would require the removal of a very significant amount of soil, which would need to be replaced with backfill that may not be available due to the AOC's stringent requirements for soil quality. If an adequate volume of soil cannot be sourced, the remediation would potentially leave the SSFL with unsightly pockmarks that would adversely impact not just the area's aesthetics, but also its usability for biological habitats and recreation. The DEIS does not adequately address the adverse impacts associated with this potential outcome of the AOC Alternative.

10.2 ANALYSIS OF ALTERNATIVES

The amount of soil that would be disturbed varies significantly among the clean-up alternatives. [Table 3](#) provides a comparison of the impacts of the soil remediation alternatives on geology and soils.

Table 3. Impacts of Soil Remediation Alternatives on Geology and Soils

Parameter	No Action Alternative	Soil Remediation Action Alternatives		
		AOC Alternative	Revised LUT Alternative	Conservation Alternative
Volume of soil removed (cubic yards)	Not applicable	933,000	192,000	148,000
Area of disturbed soil (acres)	Not applicable	130	40	32

156-25 156-25 See the response to comment 156-23.

**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

All soil remediation action alternatives would adversely impact soil resources. Potential impacts from soil removal and backfilling would include loss of soil due to erosion and loss of soil function if the backfill is not compatible with the requirements of native plants within Area IV or the NBZ. The amount of erosion would be approximately proportional to the area disturbed by the removal activities under each alternative. The backfill should have similar texture, pH, and nutrient status compared to native soils on site to support native plant communities.

If sources for this large quantity of comparable quality backfill cannot be located, then DTSC, DOE, and the United States Environmental Protection Agency (EPA) would enter into a consultation process, and DTSC would determine the best available source of backfill.

The discussion of backfill states that the backfill material assessed to date would have levels of chemical and radioactive constituent concentration values that would not meet the AOC LUT concentration values. The text should disclose which chemical and radioactive constituents would likely exceed the AOC standards by presenting a quantitative comparison of chemical and radiological constituents in site soil to representative backfill soil. The DEIS should also assess the potential impacts that would occur if sufficient backfill soils are not located despite the agency consultation process.

10.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

Impacts to AJU associated with the removal of soil are discussed above in Sections 6.0 (Transportation and Traffic), 7.0 (Air Quality/Dust) and 9.0 (Aesthetics and Visual Resources). In each instance, adverse impacts are significantly greater under the AOC Alternative because that alternative requires a significantly greater volume of soil removal.

The DEIS states that it may not be possible to find 933,000 cubic yards of backfill soil that meets the AOC's standards. The fact that backfill may not meet AOC standards raises a question as to whether the SSFL would be left with excavations that cannot be backfilled. This would certainly impact AJU and other community members because it would adversely affect the area's visual characteristics, as some or all of the area may be left with unsightly pockmarks. It could also affect the area's usability as a recreational area and as habitat for biological resources, and it may pose a health and safety concern due to the presence of holes and uneven ground surface. If it is possible that excavations would be left unfilled, associated impacts should be addressed in these sections of the DEIS.

It is important to note that the potential unavailability of adequate backfill soil is due to the usually stringent soil quality requirements imposed by the AOC Alternative. Under these requirements, soil that would be acceptable for most remediation and development projects cannot be used at the SSFL due to trace levels of contaminants that are not, as a general matter, perceived to be a threat to human health or the environment. DOE and the community should question whether removing and replacing such large quantities of soil with non-native soil that is of similar chemical and radiological content serves the public interest. This question should be discussed in more depth in the DEIS by including a quantitative comparison of chemical and radiological constituents in site soil to representative backfill soil. An objective analysis would shed light on whether the AOC Alternative is a practical remedial option.

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The EIS includes a discussion of the technical issues associated with implementing the 2010 AOC in Chapter 2, Section 2.3.3.1. In support of the issues related to finding an acceptable backfill source, this Final EIS includes a revision that adds Tables D-9 through D-12 in Appendix D comparing the results of the evaluated backfill soil samples to the AOC LUT values. For example, Final EIS Appendix D, Section D.6.2 presents soils test results for the Gillibrand facility in Simi Valley. These data show that soil samples would exceed LUT values for antimony, anthracene, and phenanthrene and the EIS states in Section D.6.2 that none of these results is at a level that would pose a risk to human health or the environment. Similar information is provided in Section D.6.2 for other backfill source locations.

**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
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11.0 BIOLOGICAL RESOURCES

11.1 OVERVIEW

The ROI for Biological Resources is Area IV, the NBZ, and downslope areas that could be affected by runoff, erosion, or sedimentation from activities occurring at Area IV and the NBZ. The analysis is focused on impacts on undisturbed native habitat, aquatic and wetland habitats, sensitive species, designated critical habitat, and nesting birds protected by the Migratory Bird Treaty Act.

The DEIS analysis should include a more robust analysis of biological resource impacts within the proposed exemption areas. Without this analysis, the community and the DOE are deprived of information necessary to assess the impact of the soil remediation alternatives on sensitive species and habitats, as well as the indirect impacts that the remediation alternatives may have on nearby land. The DEIS should also consider the long-term impact to biological resources in the event that an adequate volume of backfill cannot be located to replace soil that would be removed under the AOC Alternative.

11.2 ANALYSIS OF ALTERNATIVES

Table 4 presents the impacts of the soil remediation alternatives on biological resources. As shown, implementing the AOC Alternative would adversely affect up to four times as much vegetation and habitat as the other soil remediation alternatives.

Table 4. Impacts of Soil Remediation Alternatives on Biological Resources

	Vegetation and topsoil removal	Disturbance of undisturbed native habitat	Impacts to wetlands and aquatic habitats	Impacts to critical habitat for two ESA-listed species ^a	Disturbance in exemption areas ^b
AOC Alternative ^c	130 acres	51 acres	<1 acre	130 acres	101 acres
Revised LUT Alternative	40 acres	17 acres	0.4 acre	40 acres	50 ^d
Conservation Alternative	32 acres	13 acres	0.4 acre	32 acres	40 ^d
No Action Alternative	None	None	None	None	None

Notes:
 ESA Endangered Species Act
 a Overlap specifically with designated critical habitat is not quantified in the DEIS; impacts are based on total area to be disturbed.
 b The acreage of disturbance in exemption areas is currently unknown; however, the DEIS states that 101 acres of the total of 220 acres of exemption areas contain chemical or radioactive constituents exceeding AOC LUT values. Although efforts would be made to minimize disturbance in these areas, some level of disturbance is likely if AOC LUT values are to be achieved. Note that the exemption areas contain wetlands and aquatic habitat, although this is not quantified in the DEIS.
 c This acreage does not include the proposed exemption areas, which are an additional 101 acres where, although effort would be made to minimize effects, biological resources would still be adversely impacted and/or AOC values would not be achieved in all locations.
 d Not quantified in DEIS. Estimates are based on visual assessment of DEIS Figures 2-4 and 2-5.

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The purpose of the biological exemption areas is to minimize impacts to resources within these areas. Therefore, if there were no chemicals or radioactive constituents within these areas that posed a risk to public health or the environment, the areas would not be disturbed and the impacts would be zero. However, if levels of constituents in these areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals to minimize impacts. This EIS identifies 54 acres that would be treated through monitored natural attenuation (many of which otherwise would have been subject to the exemption process) and an additional 77 acres in Area IV and the NBZ in which the exemption process would be applied. Of this area, the Final EIS identifies 4 acres in which active cleanup measures would be used for the protection of biological and cultural resources. No cleanup activity would be required in the remaining areas. (Additionally, a significant amount of the area identified in the draft EIS as containing sensitive biological resources subject to the exemption process are now, in this final EIS, being treated using monitored natural attenuation, see Appendix D of this final EIS). The degree of disturbance caused by removal actions within the areas where the exemption process would be applied would vary from one such area to another, depending on the nature and extent of the removal actions required (see Chapter 4, Section 4.5, for a discussion of the impacts). The process and controls that will be used to ensure minimal impacts also may vary from area to area and are included in the U.S. Fish and Wildlife Service Biological Opinion (see Appendix J of this EIS). Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for further discussion.

Section 3 – Public Comments and DOE Responses

**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

The rightmost column of [Table 4](#) also contains an assessment of the likely impacts within the proposed exemption areas, which are not quantified in the DEIS. The estimates presented in the table are based on a visual assessment of DEIS Figures 2-4 and 2-5. Sensitive biological resources in the proposed exemption areas include two species protected under the Endangered Species Act (ESA), critical habitat for these two ESA-listed species, potential habitat for a third ESA-listed species, one species listed under California's ESA, multiple plants listed on California's Rare Plant Rank, and birds protected under the Migratory Bird Treaty Act.

The DEIS analysis focuses on impacts outside the proposed exemption areas and states that the level of disturbance within the proposed exemption areas would be minimized and would be determined after agency consultation. The proposed exemption areas represent the most biologically (and culturally) sensitive areas at the project site. In addition, the proposed exemption areas overlap areas where contaminants may exceed the AOC cleanup levels on up to 101 acres, which represent 78 percent of the acreage outside the proposed exemption areas.

Even if impacts within the proposed exemption areas are minimized through measures developed during agency consultation, the proposed exemption areas represent a large land area and impacts on biological (and cultural) resources in these areas could be substantial. Further, because biological resources interact at the ecosystem level, the substantial disturbance outside the proposed exemption areas would disrupt biological resources within the proposed exemption areas (see DEIS page 4-61).

The DEIS should be amended to contain a more robust analysis of impacts within the proposed exemption areas. Even though consultation is not complete, assumptions could be made so that impacts within the proposed exemption areas could be analyzed at a similar level of detail as impacts outside the proposed exemption areas. If the DEIS is edited to include this analysis, the magnitude of the impacts of the AOC Alternative will be shown to be even greater than is currently stated in the DEIS due to the significantly greater disruption that the AOC Alternative requires. This additional analysis should include specific information about:

- Anticipated numbers of "takes" of listed species
- Projected amount of disturbance in designated critical habitat
- Projected impacts to wetlands and aquatic habitats
- Estimated acreage of vegetation disturbance, topsoil removal, and native habitat disturbance
- Potential impacts to movement corridors and regional populations
- Impact associated with increase of non-native invasive species both on-site and regionally

The DEIS states that impacts to critical habitat for two species listed under the ESA (Braunton's milk-vetch, a plant, and California red-legged frog) would be "minimized through the use of focused removal actions" and would be "similar" for all three active soil remediation alternatives (DEIS page S-51, Table S-7). However, these claims are not substantiated because the DEIS does not adequately analyze impacts within the proposed exemption areas, including specific impacts to critical habitat for these species and anticipated number of takes. This analysis should not be deferred to agency consultation but should be included in the DEIS so that effects are

156-28

156-28 See the response to comment 156-27. At the time the Draft EIS was issued, the Biological Assessment required as part of Section 7 consultation had not yet been submitted. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. The Biological Opinion provides USFWS conclusions regarding the impact of actions on each species.

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**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)**

disclosed to the public and can be evaluated by interested members of the public, such as neighboring property owners, whose own biological resources will in turn be impacted.

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The DEIS should also be amended to address adverse effects on biological resources, such as ability to provide suitable habitat for species of special concern and native species of flora and fauna, if enough backfill or suitable backfill cannot be obtained.

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11.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

Indirect impacts on biological resources at the BBC are likely to occur under any of the three alternatives, but would be most pronounced under the AOC Alternative. Such impacts are necessarily difficult to predict due to the complexity of the local ecosystem. Among other things, the removal of native habitat, including woodlands, could force the relocation of wildlife populations to habitable areas on the BBC, with unknown consequences for flora and fauna currently on the BBC. Removal of native vegetation could allow invasive species to flourish, and the incidence of invasive species at the BBC could also increase. These impacts would significantly outlast the duration of the cleanup, and may become permanent if flora and fauna are not able to reestablish themselves on the SSFL property following the cleanup.

To reduce biological impacts that would affect the BBC and the area's ecosystem functioning and ecological services in general, DOE should commit to implementation of Mitigation Measures BR-1 and BR-2 in its Record of Decision. BR-1 would mitigate impacts on threatened and endangered species, and BR-2 would mitigate impacts on wetlands, both of which would support the area's natural and biological resources and their continued functioning.

|| 156-29

156-29 As described in response to comment 156-28, the USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. The USFWS-issued Biological Opinion concurs that the proposed action would not likely jeopardize the continued existence of a federally listed species or result in adverse modification of critical habitat. The Biological Opinion provides information on the potential impacts of the remediation actions, and the ability of the mitigation measures to limit these impacts. As stated in response to comment 156-27, this EIS identifies 4 acres in Area IV and the NBZ in which the exemption process would be applied and carefully planned, focused removal of contaminants found at levels above risk-based screening levels would be performed.

12.0 HUMAN HEALTH

12.1 OVERVIEW

Appendix G of the DEIS provides an evaluation of human health risk from current conditions and future conditions (100 years in the future, assuming no remediation occurs but that there is radionuclide decay), the results of which are summarized in Sections 3.9 and 4.9 of the DEIS. Risks for a hypothetical suburban residential receptor (350 days per year, 24 hours per day, for 30 years) are provided as well as risks to a recreational receptor (75 days per year, 8 hours per day, for 30 years). Results for both radionuclide exposure and chemical exposure are provided and were calculated using site-specific risk-based screening levels. Exposure pathways included are inhalation of particulates and radionuclides, incidental soil ingestion, and dermal contact (chemicals only) or other external exposure (radionuclides only). Ingestion of homegrown fruits and vegetables is not included; groundwater as a source of drinking water is also not included in the risk assessment. Those pathways are properly excluded as neither is likely to be complete.

The risk assessment also calculated risks to remediation workers while remediation is occurring. However, these exposure scenarios are not relevant to AJU and off-site receptors, and are therefore not further discussed in this report.

The analysis of risks is consistent with the agreed-upon methodology for the SSFL; however, the DEIS does not adequately assess the risk that offsite users will be exposed to pathogens present in the dust generated by the soil remediation alternatives. Such impacts are greatest under the

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**Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
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AOC Alternative, which would generate significantly more dust – and do so over a much greater time horizon – than the Revised LUT or Conservation Alternatives.

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12.2 ANALYSIS OF ALTERNATIVES

The risk assessment shows that the current site-related radionuclide risk (from Subarea 5B in Area IV, without uranium and thorium decay products and excluding risks from background radionuclides) is 2.3E-5, compared to the background risk of 1.9E-5. Based on these calculations, the removal of soil under any of the alternatives will not appreciably change the risk (a current total of 4.2E-5 to the hypothetical residential receptor, half of which is related to background). The site-related risk to the recreational receptor, which, although still highly conservative, is a more likely exposure scenario, was calculated from sampling data averaged over the NBZ and Area IV combined, and totaled 7E-6 (excluding background and uranium and thorium decay chain radionuclides). This risk is related only to cesium-137 (at 4.5E-6) and tritium (2.4E-6), and the tritium concentration represents only one detection that was above the field action level. The risks associated with background concentrations of arsenic and uranium and thorium decay chain products present greater risks (totaling over 7E-5), and there would be no measureable decrease in human health risk to a recreational receptor from soil removal.

The current and hypothetical future risks associated with site-related chemicals in the NBZ and Area IV are below the background risk, as shown in Appendix G and summarized in Section 4.9 of the DEIS. The removal of soil from the NBZ would not result in a meaningful reduction of risk to human receptors.

The DEIS does not analyze potential off-site exposure related to dust and particulates for off-site receptors while remediation is occurring. Although dust suppression is part of the remediation plan, dust may still be generated by the use of heavy equipment on unpaved areas of the site, excavation of soil, and transport of removed soil to disposal facilities. In addition, any stockpiled soil that is temporarily stored on-site while awaiting transport may be subject to wind dispersion. The DEIS should include an analysis of this exposure pathway for the three action alternatives to show that it is either not significant to off-site receptors or that it is potentially significant and that steps will be taken to control any off-site dust dispersion.

|| 156-14
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In addition, page 3-107 of the DEIS requires correction: the text states that Table 3-22 presents risk-based screening levels (RBSL) for noncarcinogens based on a hazard index of 0.1, but the RBSL footnote for Table 3-22 indicates that the RBSLs are based on a hazard index of 1.0; the table is correct. Note also that tables in Appendix G present the RBSLs at a hazard index of 0.1. To avoid confusion, the RBSLs should be presented at one consistent hazard index.

|| 156-30

156-30 This Final EIS was revised to correctly and consistently present the relationship between the RBSLs and hazard indices.

12.3 POTENTIAL IMPACTS TO AMERICAN JEWISH UNIVERSITY

There is no appreciable benefit to the BBC from any of the three soil remediation alternatives in the NBZ, as human health risks under existing conditions are already below standard regulatory action levels. The removal of soil from the NBZ would not appreciably lower human health risk because the highest risks – which are themselves well below action levels – are posed by naturally occurring constituents. The removal of soil from Area IV also should not impact human health risks for users of the BBC, as long as dust suppression is implemented and water runoff from activities related to removal actions is contained. However, the action alternatives

|| 156-14
cont'd

Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

themselves, and in particular the AOC Alternative, may cause adverse health impacts to users of the BBC.

As described in Section 7 of the DEIS, Valley Fever is caused by a fungus (*Coccidioidomycosis*) that lives in soil. According to the California Department of Public Health (CDPH), Division of Communicable Disease Control (2016), spores of this fungus occur in areas with dry dirt and desert-like weather conditions, such as those at SSFL. Spores of the fungus are carried with dust and Valley Fever is contracted when those spores are inhaled. The CDPH warns that people may contract the disease if they participate in recreational activities where dirt and soil are disturbed or work in jobs where dirt and soil are disturbed. Further, they recommend staying indoors on windy days or when the air contains dust. It stands to reason that the massive amount of soil that would be removed under the AOC option would greatly increase the risk of people becoming ill from Valley Fever due to an increase in release of spores and dust to air. Any option that decreases soil disturbance would pose less risk than the AOC Alternative, and relative to the AOC Alternative, the Revised LUT and Conservation Alternatives will remove much less soil from the site, require fewer trips of trucks containing soil, and reduce the period in which heavy equipment is disturbing soil on-site from ten to approximately two years. Each of these factors will reduce the risk that those who live or visit areas near the SSFL may contract Valley Fever.

13.0 SUMMARY OF POTENTIAL IMPACTS

Table 5 below presents a summary of the project effects, in which the intensity of adverse effects is categorized as substantial, moderate, minor, or negligible. Substantial adverse effects are those that would exceed the impact thresholds as defined in the DEIS. Moderate adverse effects are those that would be considerable but would not exceed the DEIS impact thresholds. Minor effects are those that would be noticeable or measurable but minimal. Negligible adverse effects are those that would be so slight as to generally not be noticeable. To provide an overview of effects, the table presents only the highest degree of adverse effect. For example, if both minor and moderate adverse effects are expected, moderate adverse effects are listed; if both minor and moderate adverse effects are expected, minor adverse is listed.

As shown in the table, the AOC Alternative would have much greater adverse impacts than the other soil remediation alternatives. The AOC Alternative would have substantial adverse impacts on five resource areas, compared to substantial impacts on just one resource area for the other soil remediation alternatives. Impacts from implementing the AOC Alternative would be greater than those of the other alternatives for 75 percent of the resource areas that would result in adverse impacts.

Impacts that would be greater under the AOC Alternative include, but are not limited to:

- Use 40 million gallons of potable water
- Increase the risk of Valley Fever
- Disturb critical habitat for two endangered species
- Disturb native habitat for many wildlife species
- Increase soil erosion and landslide potential
- Increase fugitive dust emissions
- Increase truck traffic
- Cause up to three traffic fatalities

156-14
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Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

The one area where all of the soil remediation alternatives would have substantial adverse impacts is consumption of potable water (Section 4.1). Although water consumption would be substantial under all of the alternatives due to California's water shortage, the AOC Alternative would consume four to five times as much water as the other soil remediation alternatives (40 million gallons for the AOC Alternative versus around 8 million gallons for the others).

The risk calculations demonstrate that no soil removal action is strictly necessary to protect human health. Current on-site human health risks are already within the range of acceptable risk (1E-6 to 1E-4) and will decline over time due to natural attenuation. The current hypothetical risk (on-site, residential scenario) that is not associated with background concentrations of arsenic, uranium, and thorium has been calculated at no greater than 2.3E-5 (which is less than the lifetime risk of being struck by lightning²), and the incremental hazard index is 0.1. Under the recreational scenario, the incremental cancer risk falls to 7E-6 and the incremental hazard index is 0.42. These would be the highest risks that are site-related and that would remain in place (but decrease over time) if no removal actions occur. These risks and hazard indices do not indicate any need for soil remediation actions to occur. Further, given that these values are based on upper bound estimates both of exposure concentration and site use, it is unlikely that such risks would ever be realized.

In contrast, the AOC Alternative will result in multiple adverse impacts for the community around the SSFL, including most notably:

- Causing up to 3 traffic fatalities resulting from the additional truck trips that the AOC Alternative requires;
- Increasing air emissions that are related to increased incidences of respiratory diseases, and increased aggravation of asthma and other respiratory diseases in persons who already have these conditions;
- Increasing the risk of Valley Fever, which although often mild and treatable, can be severe or fatal to at-risk persons (such as pregnant women and persons with compromised immune systems); and
- Using 40 million gallons of potable water for dust suppression and other activities, in an area that has been experiencing drought conditions for several years.

While both the Revised LUT and Conservation Alternatives will also affect surrounding areas, the scope and scale of those alternatives are mild compared with the AOC Alternative, and their adverse impacts are substantially less severe. At the same time, the health risk outcomes of all three alternatives are comparable. As with any environmental action considered under NEPA, it is incumbent on the decision maker to carefully consider these costs and benefits when selecting among the available alternatives.

² The lifetime odds of being struck by lightning are 1 in 13,000 per the National Oceanic and Atmospheric Administration (<http://www.lightningsafety.noaa.gov/odds.shtml>).

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Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

Table 5. Summary of Project Effects

Resource	Soil Remediation				Building Demolition		Groundwater Remediation		
	No Action	AOC LUT	Revised LUT	Conservation	No Action	Building Removal	No Action	MNA	Treatment
Land Use	None	None	None	None	None	None	None	None	None
Recreation	None	Moderate adverse	Minor adverse	Minor adverse	None	Minor adverse	None	Negligible adverse	Negligible adverse
Infrastructure	Negligible adverse	Substantial adverse	Substantial adverse	Substantial adverse	None	Moderate adverse	None	Minor adverse	Minor adverse
Aesthetics	None	Moderate adverse	Minor adverse	Minor adverse	Negligible adverse	Minor adverse	None	Minor adverse	Minor adverse
Geology and soil	Minor adverse	Substantial adverse	Moderate adverse	Moderate adverse	None	Minor adverse	None	Minor adverse	Moderate adverse
Surface water	Minor adverse	Minor adverse	Negligible adverse	Negligible adverse	Minor adverse	Negligible adverse	Minor beneficial	Minor beneficial	Minor beneficial
Groundwater	Minor adverse	None	None	None	None	Minor adverse	Minor beneficial	Minor beneficial	Minor beneficial
Biological resources	None	Substantial adverse	Moderate adverse	Moderate adverse	None	Minor adverse	Minor adverse	Minor adverse	Minor adverse
Air quality and climate change	None	Moderate adverse	Minor adverse	Minor adverse	None	Minor adverse	None	Minor adverse	Minor adverse
Noise	None	Minor adverse	Negligible adverse	Negligible adverse	None	Minor adverse	None	Negligible adverse	Negligible adverse
Transportation and traffic	None	Substantial adverse	Moderate adverse	Moderate adverse	None	Moderate adverse	None	Moderate adverse	Moderate adverse
Human health, contaminant exposure	None	Negligible beneficial	Negligible beneficial	Negligible beneficial	None	Minor adverse	None	None	Moderate adverse

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Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

Table 5. Summary of Project Effects (Continued)

Resource	Soil Remediation				Building Demolition		Groundwater Remediation		
	No Action	AOC LUT	Revised LUT	Conservation	No Action	Building Removal	No Action	MNA	Treatment
Human health, Valley Fever	None	Moderate adverse	Minor adverse	Minor adverse	None	Minor adverse	None	None	Moderate adverse
Waste management	None	Negligible adverse	Negligible adverse	Negligible adverse	Negligible adverse	Minor adverse	None	Negligible adverse	Negligible adverse
Cultural	None	Negligible adverse	Negligible adverse	Negligible adverse	None	None	None	Negligible adverse	Negligible adverse
Socioeconomics	None	Minor beneficial	Minor beneficial	Minor beneficial	None	Minor beneficial	None	Negligible beneficial	Negligible beneficial
Environmental Justice	None	None	None	None	None	None	None	None	None
Sensitive-aged populations	None	None	None	None	None	None	None	None	None

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Commenter No. 156 (cont'd): Rabbi Jay A. Strear,
American Jewish University (AJU)

14.0 REFERENCES

- CDPH (California Department of Public Health). 2016. Division of Communicable Disease Control. 2016. Valley Fever Fact Sheet. Available at <http://www.cdph.ca.gov/HealthInfo/discond/Documents/VFGeneral.pdf>
- CDPH. 2017. Yearly Summaries of Selected General Communicable Diseases in California, 2011-2015. Surveillance and Statistics Section, Infectious Disease Branch, Division of Communicable Disease Control, Center for Infectious Diseases. Available at <http://www.cdph.ca.gov/data/statistics/Documents/YearlySummaryReportsofSelectedGeneralCommDiseasesinCA2011-2015.pdf#page=37>.
- CEQ (Council on Environmental Quality). 2016. *Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews*. August.
- DOE (United States Department of Energy). 2017. *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory*. DOE/EIS-0402. January.
- DTSC (Department of Toxic Substances Control). 2007. *The State of California Environmental Protection Agency, Department of Toxic Substances Control, The Boeing Company, the National Aeronautics and Space Administration, and the United States Department of Energy, In the Matter of: Santa Susana Field Laboratory, Simi Hills, Ventura County, California, Consent Order for Corrective Action*, Docket No. P3-07/08-003, Health and Safety Code Section 25187, August 16.
- DTSC. 2010. *The State of California Environmental Protection Agency, Department of Toxic Substances Control and the United States Department of Energy, In the Matter of: Santa Susana Field Laboratory, Simi Hills, Ventura County, California, Administrative Order on Consent for Remedial Action*, Docket No. HSA-CO 10/11-037, Health and Safety Code Sections 25355.5(a)(1)(B), 58009 and 58010, December 6.

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Commenter No. 157: Ronald B. Ziman

Ronald B. Ziman, MD, FACP, FAAN

Neurology

Dipl. Am. Bd. of Psychiatry & Neurology, Neurology
Dipl. Am. Bd. of Psychiatry & Neurology, Vascular Neurology
Dipl. Am. Bd. of Internal Medicine

Fellow, Am. Acad. of Neurology
Member, Stroke Council, AHA/ASA
Fellow, Am. College of Physicians
Fellow, Am. Epilepsy Society



Brain Injury Spine and Spinal Cord Injury Pain Management Nerve and Muscle Diseases
Parkinson's/Movement Disorders Alzheimer/Dementia Stroke Epilepsy Sleep Disorders Multiple Sclerosis
EMG/Nerve Conduction EEG Evoked Potentials
AME QME IME

6 March, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL, Area IV EIS
US Department of Energy
4100 Guardian St Suite 160 Simi valley, CA 93063

Re: DOE EIS Area IV and Northern Buffer Zone of the Santa Susana Field Laboratory

Dear Ms. Jennings,

I provide these comments as a concerned citizen, resident of Bell Canyon, literally at the doorstep of SSFL, stakeholder and taxpayer. Thank you for giving me the opportunity to comment on the DOE's SSFL Draft Environment Impact Statement. This document is well researched, develops alternatives with their benefits and consequences, and allows for a future selection of a cleanup method.

157-1

I support the Conservation of Resources alternative, which satisfies the National Contingency Plan, The California Health Act, NEPA and the US EPA guidelines, and includes development of alternatives, the use of risk assessment and incorporates area averaging. The existing AOC agreement between DOE and DTSC does not satisfy any of these laws and regulations, requires an unachievable cleanup date of 2017, and needs to be re-opened for amendment at the very least. This alternate more accurately identifies those areas for remediation that present threats to human health and balances the risks to the affected community by undertaking a cleanup with less excavation, diesel/dust, other pollution and truck traffic.

157-2

I am also in favor of natural attenuation with monitoring, where appropriate, for soil remediation and groundwater. The groundwater is confined and contained by the bedrock

157-1 Thank you for your comment.

157-2 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Section 2.3, "Suitable Backfill Soil," of this CRD. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

As discussed in Chapter 2, Section 2.3.2, of this EIS, one potentially effective form of onsite remediation would be to use monitored natural attenuation for management of certain low-concentration, petroleum-contaminated (TPH) soil. DOE has estimated that this onsite treatment method would reduce the amount of soil to be considered for removal at Area IV and the NBZ by about 620,000 cubic yards, with corresponding reductions in truck traffic and emissions of air pollutants. This or any other onsite treatment method would have to be approved by DTSC.

DOE acknowledges that an acceptable source of backfill that meets the LUT values has not been identified and notes the importance of a backfill soil that would support native plant communities. As described in Section 2.4 of this Final EIS, backfill soils that meet the higher concentration limits under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resource Alternative should be easier to locate, although it still could be a challenge to identify backfill with similar physical, chemical, and microbial characteristics that could support re-establishment of native vegetation. DOE plans to identify a source of backfill in the Soil Remedial Action Implementation Plan that must be approved by the DTSC prior to initiation of soil remediation activities. Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source.

Commenter No. 157 (cont'd): Ronald B. Ziman

characteristics, current water management tactics and local treatment. Exposing communities to the risks associated with transporting large volumes of minimally contaminated soil to be ultimately naturally attenuated in landfills, when that soil could safely be naturally attenuated or treated on site is irrational and is without justification. Where deemed safe and feasible, the maximum amount of soil should remain on site for either treatment, in-situ treatment or sequestration to protect the public while naturally attenuating. The "Million Dollar Hole" might be considered as a site for potential on-site sequestration for those contaminated soils deemed inadvisable to transport through communities to a landfill. This assumes that the hole would be properly lined to shield the fill from the water table such that any substances placed in that hole would not leech into the groundwater, further contaminating it.

The existing AOC define a severely flawed process and should not be selected for implementation. This contractual agreement contains a list of chemicals that are to be removed from the DOE site that was compiled from unknown sources without consideration of toxicity to humans or the environment. The substances sampled use cleanup targets that are unrealistically low background or detection levels beyond the lab's acceptable confidence standards. The document does not have any consideration of end use, toxicity or health threats to people or the environment and it does not comply with any of the federal and state laws or regulations governing such cleanups. It ignores Section 6.8 of the California Health and Safety code which is California law and requires risk evaluation before cleanup. It precludes risk assessment, NEPA and CEQA, among other laws as noted. My understanding is that there was no legal evaluation prior to signing this document which is pre-decisional in that no alternatives can be considered and risk ignored. Yet what everyone wants is to minimize risk. It would appear that this document is not legal.

Furthermore it requires point-by-point sampling for 132 substances with extraordinarily low standards that almost guarantee detection of something in all areas tested requiring removal of unnecessarily massive amounts of soil. Finding soil for backfill of the excavations will be impossible given the numerous substances tested for, the unusually tight criteria and the point-by-point sampling. State law requires that the environment be restored. Even in the unlikely event that some backfill were to be found that meets the stringent requirements of the AOC, it would not begin to restore the habitat that will be destroyed. The fact that backfill clean enough to meet the stringent and unrealistic levels of the AOC is nowhere to be found only serves to underscore how unrealistic it is to attempt to clean up to these standards. By criteria defined in the AOC, no place in California is safe. The cleanup to AOC standards will put communities at unnecessary risk from transport of soil with little, if any, lowering of risk from toxicity of substances located at SSFL.

Another alternative uses risk assessment for the Look Up Table values. This method accounts for toxicity and threats to human health. It reduces the number of substances that would trigger rejection of soil by approximately 80 %. However the point-by-point sampling method indicates a high probability of soil rejection and will require unavailable backfill. This was not the method used at Hunter's Point and is not

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157-3 Onsite disposal options were eliminated from analysis in this EIS because the 2010 AOC does not allow onsite burial or landfilling (excavating and burying) of contaminated debris or soil. Boeing owns the land in Area IV and the NBZ. DOE's intent is to complete its cleanup responsibilities, then relinquish the land to Boeing's control. DOE does not want any enduring responsibility for a landfill created on site.

157-4 DOE acknowledges your observations and concerns regarding the 2010 AOC. As a point of clarification – the AOC, Section 4.0 indicates that DTSC is to prepare an analysis under CEQA. The DTSC is preparing a *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Section 7.11, requires that DOE actions taken pursuant to the order be undertaken in accordance with applicable local, State, and Federal laws and regulations, which would include NEPA. This clause recognizes that DOE must comply with NEPA, as do Sections 6.1 and 6.2 of the AOC. Section 6.1 acknowledges DOE's obligation to prepare an EIS and ROD(s) pursuant to a court order. Section 6.2 recognizes the need to complete an environmental review that meets the requirements of the court order. DOE did have legal representation during the negotiation of the 2010 AOC.

Commenter No. 157 (cont'd): Ronald B. Ziman

considered normal methodology for cleanups such as SSFL. Point by point methodology creates a bad precedent for future cleanups. I am not in favor of this alternative.

The No Action alternative should also be rejected. This site is leased by DOE from Boeing. If DOE does not clean up the site, that action would not comply with Boeing's commitment to clean their property to the EPA suburban residential standard for ultimate use as open space.

I note that cultural and biological exceptions are not in the draft. There is the issue of the 5% exception noted in the AOC that is neither invoked nor taken into account in the DEIS. It should be included.

I have concerns that trucking large volumes of soil will create risk to the communities on multiple levels. Diesel air pollution is now associated with many adverse health consequences to people. These include, but are not limited to, increased morbidity and mortality from carcinogenicity, adverse pulmonary consequences, stroke, heart disease and dementia. Truck traffic statistics demonstrate predictable frequencies of traffic accidents creating additional incremental risk to local communities. The currently proposed truck routes take trucks through highly populated areas that already have significant traffic. The stress of additional truck traffic through areas without the elasticity to absorb such traffic will further significantly add to traffic congestion and result in serious negative impacts on local communities for years. Safety and quality of life should not be ignored, and must be balanced with the benefits those residents will derive from these cleanup actions. How is the issue of added wear and tear to the roads to be addressed? In my view this requires additional budgeting for repairs. During and after the cleanup repair of the roads will also add to the deterioration of quality of life, congestion and disruption for those who commute, which is just about everyone.

I recommend that air monitoring be located both on site and in the affected communities. After all, the cleanup is being done to protect the communities at risk. It should not unnecessarily imperil the health of the communities around SSFL. Air safety monitoring should also be done for San Joaquin Valley Fever (Coccidioidomycosis) which is endemic in the soil in the Western San Fernando Valley. Air dispersion of soil as fugitive dust is a well known means of transmission of the infectious spores. Increased incidence of Valley Fever is well documented following grading projects, which is, in essence, much of the cleanup activity that will be taking place at SSFL. It should be noted that BMP for dust control has not been shown to be effective at reducing the risk of Valley Fever associated with those grading projects.

In conclusion, in my opinion, the DOE should select the Conservation of Natural Resources alternative since it represents a scientific cleanup and follows federal and state laws and regulations while minimizing adverse consequences to the site, the environment, the archaeology, the history, the ecology and the surrounding communities. Where feasible this should be combined with attenuation and treatment on site. The recent DOE public hearings were highly confrontational with testimonial examples of various cancers and emotional anecdotal information, which in the past led to Senate Bill 990 and

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157-5 As discussed in Chapter 2, Section 2.3.2 of this Final EIS and shown in Table 2-3 and Figure 2-2, DOE identified proposed exemption areas to protect biological and cultural resources and accounted for these areas in soil volume estimates. Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of this topic and DOE's response. The 5 percent exemption is for unforeseen circumstances and would be invoked as necessary, subject to DTSC approval, as remediation planning and implementation proceed.

157-6 Air quality impacts from proposed offsite haul truck transport would be minimal, due to the relatively low emission rates of these vehicles. As discussed in Final EIS Chapter 4, Section 4.6.4.2, the air quality analysis estimates that unmitigated diesel particulate matter (DPM) emissions generated by a 2021 average California truck fleet within the entire South Coast Air Basin analysis domain under the nearby disposal site scenario would amount to less than 31 pounds per year, or about 0.4 pounds during a peak day (based on 32 truck round trips per peak day) (Leidos 2018b; Tables 1.A-23 and 1.A-24; [DPM is about 20 percent of the PM10 values in these tables]). These emissions would occur over about 160 miles of roadway that span a large portion of the SCAB. As a result, populations adjacent to roadways proposed for the transport of materials from the SSFL would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions.

157-7 As reported in Chapter 4, Section 4.8.2, and Appendix H, Section H-13, for traffic potentially attributable to DOE activities, for the final EIS DOE performed a detailed analysis of traffic flow quality for selected SSFL-area intersections and road segments considering operational factors such as control delay, LOS, and V/C ratios. In Chapter 5, Section 5.5.8.2, of the final EIS, DOE a performed a similar analysis to analyze cumulative traffic impacts assuming 96 daily heavy-duty truck round trips by DOE. Section 4.8.2, Section H.13, and Section 5.5.8.2 of the Final EIS were revised to document the changes in LOS ratings and V/C ratios that could potentially occur on affected road segments in the SSFL vicinity. The potential changes in V/C ratios were assessed against the thresholds for impact significance as listed in the L.A. CEQA Thresholds Guide (LA 2006). Also refer to the response to comment 146-78

DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radioactive and hazardous substances. DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. The EIS considers

Commenter No. 157 (cont'd): Ronald B. Ziman

eventually to the AOC. Now, with more data and information available, it is clear that a conservation alternative for SSFL is best cleanup for everyone.

Thank you, again, for allowing me to comment on the DOE's DEIS.

Sincerely,



Ronald B. Ziman, MD, FACP, FAAN
Associate Clinical Professor, David Geffen School of Medicine, UCLA

|| 157-2
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alternatives to accomplish these tasks, and each alternative addresses the potential impacts that implementing the alternative could have on several resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and transportation and traffic impacts. After publication of the Final EIS, DOE's decision will be issued in a Record of Decision published in the *Federal Register*, and this decision will reflect the consideration and balancing of the potential impacts on all evaluated resource areas.

157-8 The EIS evaluates the impacts on pavement due to the passage of heavy trucks qualitatively, but these evaluations were informed quantitatively through calculations of the number of equivalent single-axle loads (ESALs) traveling over the pavement structure on the evaluated roads. An ESAL is the damage caused to pavement by a single 18,000-pound vehicle axle, and can be considered a unit of pavement damage. The number of ESALs for a road was determined by multiplying the ESALs for a particular type of vehicle (particularly a heavy-duty truck) by the annual number of vehicles of that type traversing the road, and then summing the results over all vehicle types and the total number of years of truck traffic. See Appendix H, Section H.13.3.2, for additional information.

DOE calculated pavement ESALs for each alternative and combination of action alternatives addressing DOE remediation activities in Area IV of SSFL (Chapter 4), as well as the remediation activities in other SSFL areas by Boeing and NASA (Chapter 5), and considered these ESALs when determining whether an alternative, combination of action alternatives, or combination of actions by DOE, Boeing, and NASA could require pavement repair sooner than was anticipated when the evaluated road was last paved. This analysis was performed in Sections 4.8.2 and 5.5.8.2 of the EIS. In addition, Section 4.12 includes an analysis of the potential impacts on infrastructure and municipal services and local government revenue due to DOE's activities, while Section 5.5.12 includes a similar analysis for combined DOE, Boeing, and NASA activities. These analyses include the potential for local economic impacts due to the need to repair road pavement sooner than anticipated.

157-9 This Final FEIS demonstrates that by complying with applicable Ventura County Air Pollution Control District (VCAPCD) Rules, combustive and fugitive dust emissions generated from cleanup activities proposed by the DOE would produce less than significant air quality impacts on locations outside of the SSFL boundary. Direct transport of these emissions to a distance of nearly one mile to the nearest residence or farther would further dilute these pollutant concentrations to well below any level of health concern.

Commenter No. 157 (cont'd): Ronald B. Ziman

The proposed cleanup activities would adhere to a fugitive dust control plan that identifies a variety of measures to minimize emissions and therefore to comply with VCAPCD Rule 55 – Fugitive Dust. Personnel would visually monitor the proposed cleanup activities on a real time basis and if there were any noticeable increase in emissions, such as fugitive dust, they would quickly implement measures to mitigate their intensities, thereby avoiding any substantial air pollutant exposure to the public.

DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is operating the system to establish a pre-remediation baseline. The system will continue to operate during remediation activities to monitor any potential air pollutant releases of concern. If the air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

Regarding the impact of DPM emissions from proposed haul truck transport activities to adjacent communities, please see the response to comment 157-6.

Regarding testing for the presence of Valley Fever, Chapter 4, Section 4.9.2.6 of this Final EIS indicates that there are no commercially available tests to reliably test the soil for *Coccidioides* spores before working in a particular location (CDC 2014; HESIS 2013). Soil testing is currently only done for scientific research, and the available methods to detect *Coccidioides* in the soil do not always detect the spores, even when they are present (CDC 2014). Because the spores may be present in the soil, reasonable precautions would be taken to reduce potential for exposure. For example, the fugitive dust control plan mentioned above will include measures to reduce the risk of spreading Valley Fever that focus on fugitive dust controls recommended by the VCAPCD to minimize fungal spore entrainment, as well as minimizing worker exposure (VCAPCD 2003).

Due to the low air pollutant impacts on nearby residents that would occur from the proposed cleanup activities, DOE's visual monitoring and perimeter air monitoring stations are adequate to identify the need for any corrective actions to mitigate unacceptable air emissions.

Commenter No. 158: Brian Sujata

April 13th, 2017

Ms. Stephanie Jennings
NEPA Document Manager, SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Comments regarding Draft EIS for Remediation of Area IV and the NBZ of the SSFL.

Ms. Jennings,

I am delighted to find the document to be an extensive examination of the proposed action and the four alternatives under consideration to accomplish the goal of acceptable environmental remediation endpoint for the US Department of Energy at the Santa Susana Field Laboratory.

The DEIS appropriately includes a range of alternatives.

I appreciate the DOE contemplating the effects and consequences for a range of project alternatives. The cleanup of SSFL is unique in that it has not followed the established pathway for environmental remediation in the United States, i.e. RCRA corrective action for active sites, CERCLA for those closed. Members of the interested community are therefore at a disadvantage when it comes to understanding the unusual nature of the cleanup and its various impacts. The DOE contributed to a better community understanding of the project (and its consequences) by including a range of alternatives.

The expected minimum quantity of soil to be excavated is too low.

The supporting analysis for the soil removal quantities (D.6.1) does not consider the impacts of the 'not to exceed value' requirement for the AOC removal implementation. At least one EPA guidance document acknowledges the consequence of higher soil removal quantities under the "not to exceed value" as compared to the "area averaging" method¹.

The DEIS apparently did not consider the natural variations of the subsurface bedrock topography when arriving at the soil removal quantity estimates. In my direct experience performing and overseeing excavations at the SSFL, I have observed the soil/bedrock interface to be crenulated and difficult to predict. The amount of soil excavated was usually greater than expected.

¹ Industrial Economics Inc., and H. Rouhani, "Draft guidance on surface soil cleanup at hazardous waste sites: implementing cleanup levels", Environmental Protection Agency, Office of Emergency and Remedial Response, EPA Document no. 9355.0-91, May 2004.

158-1

158-1 Thank you for your comment.

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Since the Draft EIS was prepared, DOE has independently checked the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data and an improved understanding of the soil depth over uneven bedrock across Area IV and the NBZ, DOE is not as uncertain about the upper limit of the soil volume estimate as it was at the time the Draft EIS was prepared.

158-2

In this Final EIS, DOE has retained the analysis of the 881,000 cubic yards of soil that would be removed from SSFL under the Cleanup to AOC LUT Values Alternative. Under the 881,000 cubic yard scenario, 115,000 cubic yards of soil for the cultural and biological resources exemptions and 620,000 cubic yards for monitored natural attenuation of TPH would not be removed. However, DOE has added a sensitivity analysis to assess the potential impacts of a larger volume of soil under the Cleanup to AOC LUT Values Alternative. This sensitivity analysis evaluates the impacts of removing 1,900,000 cubic yards of soil, including the volume of soil associated with the cultural and biological resources exemptions, the volume of soil associated with monitored natural attenuation of TPH, and a 20 percent uncertainty factor.

Commenter No. 158 (cont'd): Brian Sujata

Given the nature of the cleanup requirements and the natural variation of the various factors used to estimate the soil excavation quantities, the DOE should establish an appropriate error range (which may be as high as fifty percent) to accurately describe the project outcomes to the community and revise the EIS accordingly.

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The replacement soil quantities are too low.

The DOE proposes to replace only two feet of soil at certain excavated areas. In locations where greater than two feet of soil is removed, the replacement of only twenty four inches is too little to minimize long-term impacts to the natural vegetation and biota. The DOE should replace the excavated soils with equal quantities of replacement soil in all areas and revise the EIS accordingly.

158-3

The impacts of using replacement materials having a different soil texture must be considered.

The most extreme alternative proposes to remove surface soil from nearly fifty percent of the 290-acre Area IV. Yet the DEIS focused on the chemical properties without considering the environmental impacts caused by the physical texture of the replacement materials. A widespread change to the soil texture will cause large impacts to the biota, erosion, groundwater recharge and so forth. The DOE should specifically consider and revise the EIS to present the environmental impacts of using replacement soils having a different soil texture classification.

158-4

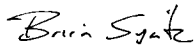
Alternatives requiring replacement soil should be rejected as infeasible.

Since the DOE was unable to locate a source for the replacement soil that meets the chemical-based removal standard, alternatives involving the removal of significant volumes of should be rejected. It makes no sense to use replacement soil having greater contaminants than those removed.

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In closing, I would like to Thank you and your staff for the opportunity to comment on the subject document. I look forward to working with you and your staff in the future.

Best Regards,



Brian Sujata
Thousand Oaks, California

158-3 In this Final EIS, DOE is retaining the 75 percent backfill replacement assumption based on professional judgment. DOE believes that the common practice of recontouring soil to provide for an adequate soil cover overall will be effective; thus, 100 percent replacement is not necessary. Note also that large areas of Area IV have been graded as part of site development, so the original contours are not known, allowing leeway in final contours following soil remediation and replacement.

Please also note that Boeing is the land owner, not DOE. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. DOE believes that 75 percent replacement with recontouring can return the land to a condition similar to its previous topography and that this action would be consistent with the long term preservation goals of the Conservation Values at the Property as identified in the Boeing open space land use covenant (Ventura County 2017a, 2017b).

158-4 Soil texture refers to the weight percentages of clay, silt, and sand particles within a sample of soil for example, soil containing approximately 40 percent sand, 40 percent silt, and 20 percent clay is classified as loam soil. Soil texture is an important soil characteristic influencing soil's water-holding capability, permeability, and workability. For any of the Soil Remediation Alternatives evaluated in the EIS, areas where soil is removed will require backfilling with clean soil to maintain non-erosive land contours and to support restoration of a self-sustaining native vegetation cover. Chapter 4, Sections 4.5.1 of the EIS acknowledges that if this backfill is substantially different than that originally present, it may not support vegetation similar to that present before development of Area IV. Soil texture would be an important consideration when locating suitable backfill.

158-5 Please refer to Section 2.3, "Suitable Backfill Soil," of this CRD, for further discussion of this topic.

Commenter No. 159: Anonymous

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 9063

Dear Ms. Jennings,

The US Department of Energy (DOE) sets its mission to ensure America's security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions. DOE's past and proposed actions regarding the Area IV Santa Susana Field Laboratory run directly counter to this mission.

As you well know, DOE entered into a Consent Order for Corrective Action in 2007 with the Department of Toxic Substances control along with other parties responsible for the toxic contamination of SSFL IV. DOE along with these parties agreed to a full cleanup of soil and groundwater by 2017. That deadline has come and gone. In 2010, DOE and NASA signed an Administrative Order on Consent with the DTSC committing to a full cleanup of soil with contamination levels above background by 2017. This deadline too has passed. DOE is now proposing several leave in place alternatives to the original no leave in place agreement. DOE has neither the legal authority nor the right to usurp DTSC mandates and self-determine the extent to which it will clean up its own contamination.

DOE has proposed four cleanup alternatives which would leave significant quantities of contamination onsite. Of particular note are the Conservation of Natural Resources and the No Action alternative. The Conservation of Natural Resources alternative, in a bid to protect sensitive flora and fauna in the area, will leave anywhere from 89.5% to 99% of chemically and radioactively contaminated soil with the flora and fauna in the area. The No Action alternative, proposes doing nothing. This soil left behind will and currently has been leeching through the groundwater and into local drainage routes. Samples taken from drainage sources show chemical and radioactive contamination levels well above toxic levels flowing with the water.

The Department of Energy needs to realize that this Draft Environmental Impact Statement is not an opportunity to create clever money saving alternatives. It is a report meant

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- 159-1 DOE's predecessor agency established what became known as the Energy Technology Engineering Center as a location at which various technologies related to nuclear energy were tested. As a result of operations conducted in accordance with accepted practices at the time, as well as inadvertent releases, soil, buildings, and groundwater, became contaminated with chemicals and radionuclides. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As stated in Chapter 1, Section 1.1 of this EIS, DOE's purpose and need is to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements. To this end, DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers.
- 159-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ. In accordance with the 2010 AOC, Section 7.11, "Compliance with Applicable Laws and Regulations," all actions taken by DOE pursuant to the order will be undertaken in accordance with applicable local, State, and Federal laws and regulations. This clause recognizes that DOE must comply with NEPA, as do Sections 6.1 and 6.2 of the AOC. Section 6.1 acknowledges DOE's obligation to prepare an EIS

Commenter No. 159 (cont'd): Anonymous

to properly analyze and determine the level of required cleanup according to the 2010 AOC look up table values. The very fact that alternatives are even being proposed is alarming to the extreme. By proposing alternatives for cleanup both below the scope and threshold of originally agreed upon safe levels, DOE has shown that it is both cognizant and uncaring of the potential for harm inflicted upon the American people. If DOE proceeds with any alternative course of action other, it will have demonstrated the value of money over American lives.

In short, DOE has both a moral and legal obligation to cleanup SSFL Area IV to the 2010 AOC agreed upon levels. Failure to do so constitutes clear and present ongoing harm to the local community and the local environment.

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and ROD(s) pursuant to a court order. Section 6.2 recognizes the need to complete an environmental review that meets the requirements of the court order.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (the AOC LUT values). In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The incorporation of a No Action Alternative is a legal requirement under Federal NEPA regulations and it forms a basis for which to compare the impacts of the action alternatives. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

None of the action alternatives analyzed in this Final EIS would leave chemical or radionuclide contamination at concentrations that would pose a risk to human health or ecological receptors (refer to Section 2.5, "Toxicity of Soil Contaminants," of this CRD).

- 159-3** DOE recognizes DTSC's authority under the AOC and the Resource Conservation and Recovery Act. DOE recognizes that DTSC need to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC and DOE-prepared RCRA closure plans for building demolition.
- 159-4** Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 160: Michael Villegas,
Ventura County Air Pollution Control District



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Michael Villegas
Air Pollution Control Officer

April 11, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Subject: Ventura County Air Pollution Control District Comments on the Draft
Environmental Impact Statement for Remediation of Area IV and the
Northern Buffer Zone of the Santa Susana Field Laboratory, Ventura County,
California

Dear Ms. Jennings,

Thank you for the opportunity to review and comment on the subject document. As the local governmental agency responsible for air quality in Ventura County, we wish to submit the following comments on this project.

The project site is south of Simi Valley in Ventura County and is therefore within our jurisdiction for air quality. The Draft Environmental Impact Statement (DEIS) analyzes the potential environmental impacts of three alternatives for cleanup activities of 290 acres in Area IV of the Santa Susana Field Laboratory (SSFL) and the adjoining Northern Buffer Zone (NBZ). Remediation is needed to clean up residual chemicals and radionuclides from past operations in the area.

Clean up activities involve separate alternatives for removal of DOE-owned facilities; remediation of radiologically and chemically impacted soil and groundwater; disposal of resulting waste and restoration of the affected environment. The No Action Alternative of continued maintenance would not increase air emissions from the project site.

Chapter 4.6 of the DEIS, *Air Quality and Climate Change*, addresses air quality impacts of the project. Proposed activities discussed in the *Impact Assessment Methodology* section of this discussion include the use of fossil fuel-powered, off-road construction equipment, on-road heavy-duty trucks, and worker commuter vehicles generating combustive emissions. Equipment and vehicles performing earthmoving and demolition activities would also generate fugitive dust. Transport of waste materials to offsite facilities will generate emissions and are evaluated within three domains: Ventura

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Ventura County Air Pollution Control District

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County and the area adjacent to SSFL, the South Coast Air Basin, and regions beyond Ventura County.

Section 4.6.4.1, *Ventura County Domain*, addresses air quality impacts that would occur within Ventura County from the groups of combined alternatives and presents emissions in terms of peak annual emissions. Unmitigated project emissions are presented in Table 4-34, *Peak Annual Emissions Under the Combined Action Alternatives*, and Table 4-35, *Peak Daily Emissions Under the Combined Action Alternatives*.

Chapter 5.11.2, *Potential Environmental Consequences of Combined Action Alternatives*, evaluated three combinations of action alternatives that would result in the highest potential air quality impacts. This discussion indicates that peak annual emissions under all three evaluated combinations would be well below the indicator emissions thresholds for Ventura County. Elevated levels of PM₁₀ would result from fugitive dust from operation of equipment and trucks on unpaved surfaces and trucks on paved roads internal to SSFL. DOE would implement measures to control fugitive dust emissions from the proposed activities, including measures to comply with VCAPCD Rule 55, Fugitive Dust. Mitigation of these emissions are discussed in Green Cleanup Impacts on Page 4-83, as well as Chapter 6, Section 6-1, *Measures to Minimize Impacts and Mitigation Measure*, on Page 6-11.

Table 5-3, *Preliminary Estimated Soil Volumes for Transportation*, indicates that 933,000 cu. yds. of soil would be removed from the site. Contaminated soil and demolition debris would be transported off site by 96 heavy-duty trucks/day. In addition to this, Cleanup to the more stringent Administrative Order on Consent for Remedial Action (AOC) Look-Up Table (LUT) would also involve 130 acres of land, 700,000 cu. yds. of backfill, 116,000 truck round trips, and 62,500 round trips of passenger vehicles. The difference in soil volume estimates between the Cleanup to AOC LUT and either the Cleanup to Revised LUT Values Alternative or Conservation of Natural Resources Alternative is at least 741,000 cu. yds. Disposal of 741,000 cu. yds. of soil would result in 55,575 truck round trips and 36,245 truck round trips for backfill.

Indicators of Projected Air Quality Impacts

The DEIS utilized EPA's Prevention of Significant Deterioration and federal conformity thresholds as indicators of the project's air quality impacts, depending upon whether an area is or is not in attainment of the NAAQS for the air pollutant of interest.

In the case of criteria pollutants for which the project region is in attainment of a NAAQS, the analysis compared the increase in annual air pollutant emissions estimated for each proposed alternative to the EPA Prevention of Significant Deterioration

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Ventura County Air Pollution Control District

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threshold for new major sources of 250 tons per year of a pollutant; the result was used as an indicator of projected air quality impacts.

In the case of criteria pollutants for which the project region is not in attainment of a NAAQS, the analysis compared the increase in proposed annual emissions to the applicable pollutant threshold that requires a conformity determination for that region. For example, for Ventura County, the analysis used the following annual thresholds: (1) 50 tons of VOC and nitrogen oxides; (2) 100 tons of PM₁₀; and (3) 250 tons of carbon monoxide, sulfur dioxide, and PM_{2.5}.

If proposed emissions exceeded a Prevention of Significant Deterioration or conformity threshold, further analysis was conducted to determine the degree of impacts. In such cases, if proposed emissions would not contribute to exceedance of an ambient air quality standard or would conform to the approved State Implementation Plan, then the impacts would not exceed regulatory thresholds of concern.

The Ventura County Air Pollution Control District (District or VCAPCD) has recommended impact thresholds for VOCs and NOx of 25 pound per day for projects in most areas of the county subject to environmental assessment under the California Environmental Quality Act. These thresholds would be appropriate for this project as well. The thresholds are presented in Chapter 3, *Air Quality Significance Thresholds*, of the District's Ventura County Air Quality Assessment Guidelines (Guidelines).

The Guidelines also present recommended guidance for assessing potential impacts of other air pollutants, such as fugitive dust and toxic air contaminants (See Chapters 3 and 6). Such assessments may require use of appropriate air quality models and protocols.

We recommend that the air quality significance thresholds presented in the Guidelines be considered to assess the potential air quality impacts of the subject project. The Guidelines are available at <http://vcapcd.org/pubs.htm#Planning>.

Nonradiological Risk

Section H.6.2 (page H-14) of Volume 2 discusses nonradiological risk associated with the generation of air pollutants by the transport vehicles used during shipment of material from the facility to disposal sites. The risk is concerned with potential fatalities from emissions of particulates and sulfur dioxide from the material haul trucks as they pass through urbanized areas to the disposal sites, particularly the densely populated areas of the San Fernando Valley. However, for the reasons stated in this section, the calculation of the risk was not presented in the DEIS.

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160-1 DOE acknowledges the authority of the VCAPCD to regulate air quality in Ventura County and to set guidelines for air quality assessments. As a result, this Final EIS air quality analysis follows much of the guidance presented in the Ventura County Air Quality Assessment Guidelines (2003) (Guidelines). For example, it includes substantial mitigation of proposed construction-related emissions, as recommended in Section 7.4 of the Guidelines. Also, consistent with the Guidelines, Section 3.3.1, this EIS determines whether emissions from proposed activities would produce localized impacts that would contribute to an exceedance of an ambient air quality standard. However, DOE believes that the 25 pounds per day VOC and NOx (ozone precursors) emission thresholds recommended by the Guidelines and requested by the commenter to evaluate the significance of proposed emissions within Ventura County are overly conservative.

When the VCAPCD updated the Guidelines in 2003, the County was in severe nonattainment area for the national ambient air quality standard (NAAQS) for ozone, whereas it is now a serious nonattainment area for ozone (one level less stringent than severe). The South Coast Air Basin adjacent to Ventura County is in extreme nonattainment of the NAAQS for ozone (two levels more stringent than serious). To determine the significance of proposed operational emissions for CEQA purposes, the South Coast Air Quality Management District (SCAQMD) in the South Coast Air Basin uses VOC and NOx thresholds of 55 pounds per day (SCAQMD 2018). Based on 365 days per year, these SCAQMD daily thresholds equate to 10 tons per year, which are the applicable VOC and NOx annual conformity de minimis thresholds for an extreme ozone nonattainment area. Based on 365 days per year, the applicable VOC or NOx annual conformity de minimis thresholds of 50 tons per year for a serious ozone nonattainment area such as Ventura County equate to 274 pounds per day, which is substantially higher than the 25 pounds per days thresholds recommended by the Guidelines.

This Final EIS uses pollutant emission thresholds for purposes of determining the significance of proposed air quality impacts that focus on the existing air quality conditions within Ventura County: (1) an EPA Prevention of Significant Deterioration (PSD) threshold of 250 tons per year for pollutants that attain a NAAQS and (2) a general conformity de minimis threshold for pollutants that do not attain a NAAQS (50 tons per year of VOC or NOx as is the case for Ventura County). DOE also considers these thresholds to be appropriate and adequate for purposes of evaluating air quality impacts within Ventura County from the proposed SSFL project alternatives, as they are based on approved regulations (EPA 2018a, 2018b).

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Ventura County Air Pollution Control District**

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Considering the number of material haul trips that will pass through the highly populated areas of the San Fernando Valley, we highly recommend that the human health risks of diesel particulate emissions from the haul trucks be assessed using an appropriate air quality model and protocols. This has been done for other projects in California involving large numbers of material haul trucks. One such example was Wayne J Sand and Gravel, located in an unincorporated area of Ventura County north of Moorpark, California. The analysis was conducted in 2015 using the California Air Resources Board HARP2 model to determine the human health risks of the project. The health risk assessment for the SSFL should also consider the cumulative human health impacts of the project along with those of the Boeing and NASA cleanup operations.

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The HARP2 model implements the 2015 OEHHA Air Toxics Hot Spots Risk Assessment Guidelines. HARP2 uses the USEPA AERMOD dispersion model to determine offsite concentrations of pollutants. Excess cancer risks were calculated assuming 30 years of exposure, with exposure beginning in the third trimester (prior to birth). The CARB/CAPCOA Risk Management Guidance was used to define breathing rates, with the 95th percentile daily breathing rate (DBR) used for age groups less than 2 years old and the 80th percentile DBR for other age groups. Per OEHHA, only inhalation risks were calculated for DPM emissions.

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Risks were calculated at gridded receptors located every 100 meters around the Wayne J facility to a distance of 1,500 meters and every 500 meters to a distance of 10,000 meters. Additional receptors were located at nearby residences and at several intersections of interest along the haul truck routes. No schools, hospitals, or other sensitive receptor types are located in the area.

Fugitive Dust

The DEIS concludes that elevated levels of fugitive dust (PM₁₀ and PM_{2.5}) from operation of equipment and trucks on unpaved surfaces and trucks on paved roads internal to facility may occur. As a result, the DEIS states that DOE would implement measures to control fugitive dust emissions from the proposed activities, including measures to comply with Ventura County Air Pollution Control District Rule 55, *Fugitive Dust*, which restricts emissions of fugitive dust from being visible beyond the property line of a source. Therefore, the DEIS concludes that these controls and restrictions would ensure that emissions of fugitive dust from the combined action alternatives would not contribute to an exceedance of a PM₁₀ ambient air quality standard at any offsite location.

The District concurs with the DEIS that elevated levels of fugitive dust may occur as a result of on-site and off-site facility operations. The District also concurs with the measures that DOE has committed to implement to minimize fugitive dust levels. However, the DEIS does not substantiate its conclusion that the dust measures would, in

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160-2 This Final EIS takes into consideration potential impacts of fugitive dust and toxic air contaminants (TACs) and their applicable impact criteria identified in Chapter 3 of the Guidelines. As discussed below, DOE does not believe that use of the referenced air quality models and protocols is necessary.

Regarding commenter's statement that assessment of potential impacts of other air pollutants, such as fugitive dust, may require use of appropriate air quality models and protocols, given the heightened concerns the public has regarding the environmental effects of the proposed soil excavation activities, DOE would achieve very high control levels on all sources of fugitive dust. To meet this goal DOE would implement fugitive dust minimization measure 6-1, identified in Chapter 6, Table 6-1, of this EIS. The need to comply with VCAPCD Rule 55, which restricts emissions of fugitive dust from being visible beyond the property line of a source, also would require DOE to achieve very high control levels on all sources of fugitive dust. The proposed cleanup activities would adhere to a fugitive dust control plan which identifies a variety of measures that would minimize emissions. For each remediation activity, minimization measures would be proactively identified for implementation. In addition, personnel would visually monitor the proposed cleanup activities on a real-time basis and if there were any noticeable increase in emissions, such as fugitive dust, they would quickly implement measures to mitigate their intensities. For fugitive dust, these could be either additional controls identified in minimization measure 6-1, such as more water application or minimization of activities, or other additional techniques. Proactively and reactively addressing emissions thereby would avoid any substantial offsite air pollutant impacts. As a result, these controls and restrictions would ensure that emissions of fugitive dust from any combined action alternative would not contribute to an exceedance of a PM₁₀ or PM_{2.5} ambient air quality standard at any offsite location. This qualitative approach to evaluating fugitive dust impacts is adequate due to the expected very high level of dust control achieved by minimization measure 6-1 and therefore a more rigorous approach using air dispersion modeling would be unnecessary to arrive at this same conclusion.

Regarding the commenter's statement that assessment of potential TAC impacts may require use of appropriate air quality models and protocols, this EIS in Chapter 4, Section 4.6.4.1, demonstrates that the proposed cleanup activities would produce relatively moderate levels of combustive air emissions (less than 100 pounds per day of any individual pollutant, such as NO_x) and since these emissions would occur intermittently from mobile sources over a large portion of Area IV, throughout approximately 3.1 miles of roads internal to SSFL, and within Woolsey Canyon Road between the site gate and the Los Angeles County boundary, they would be substantially

Commenter No. 160 (cont'd): Michael Villegas,
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fact, not contribute to an exceedance of a PM₁₀ ambient air quality standard at any offsite location. Therefore, the District recommends that fugitive dust generated by the proposed activities be assessed to determine if they would cause or contribute to ambient PM₁₀ levels at any offsite location. The assessment should also consider the cumulative impacts of the project with those of the Boeing and NASA cleanup operations.

The assessment should be done with an appropriate air quality model and should consider two scenarios: one without the benefit of the proposed dust control measures (uncontrolled scenario) and one with the benefit of the proposed dust control measures (controlled scenario). Additional measures should be proposed if the modeling indicates that project activities, with the benefit of the proposed control measures, would cause or contribute to an exceedance of a PM₁₀ ambient air quality standard at any offsite location.

Mitigation Measure AQ-1

This mitigation measure for air quality and climate change impact proposes the following:

- For off-road equipment, the lower of EPA Non-road Tier 3 emission standards or California average fleet emission factors for a given pollutant.
- For on-road trucks, a fleet with trucks no more than 5 years old.

We recommend that off-road equipment be Tier 4. Tier 4 is EPA's most stringent set of engine emission standards for off-road, diesel-powered equipment, such as dozers and road graders. Tier 4 final has now been required on all new off-road diesel-powered equipment for at least 5 years (depending on engine size), so such equipment should be available for the project.

We concur that the on-road haul truck fleet for the project be no more than 5 years old.

General Comments Regarding Equipment Requiring a VCAPCD Permit

The clean-up operation would need to comply with several VCAPCD rules and policies. In addition, some proposed soil clean-up operations would have equipment which would require a VCAPCD Permit to Operate. VCAPCD Rule 23, *Exemptions from Permit*, provides a list of equipment that does not require a VCAPCD permit.

As part of the Best Available Control Technology (BACT) analysis for the VCAPCD Permit to Operate, VCAPCD staff will be considering provisions of VCAPCD Rule 74.29, *Soil Decontamination Operations*, SCAQMD Rule 1166, *Volatile Organic Compound Emissions from Soil Decontamination*, and the VCAPCD Air Toxics Review of Permit Applications policy.

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diluted in the atmosphere. As a result, the proposed cleanup activities would produce minimal off-site impacts of TACs and resulting health impacts. The impact of TACs from proposed offsite haul truck transport also would be minimal, due to the relatively low emission rates of these vehicles. For example, this Final EIS air quality analysis estimates that unmitigated diesel particulate matter (DPM) emissions generated by a 2021 average California truck fleet would amount to 0.02 grams per mile (see Table 1.A-14 of Leidos 2018b [DPM is about 20 percent of the PM10 values in these tables]). Therefore, during a peak year of activity (2021), the project haul truck fleet would generate about 0.2 pounds per year, or 0.001 pounds during a peak day (based on 32 heavy-duty truck round trips per peak day) of DPM within the 0.4 mile segment of Woolsey Canyon Road between the SSFL gate and the Los Angeles County boundary. As a result, populations adjacent to the roadway would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions. These qualitative approaches to evaluating TACs impacts are adequate due to the low levels of TACs that would occur from proposed sources and therefore a more rigorous approach using air dispersion and risk modeling would be unnecessary.

160-3

Regarding the need to evaluate the impact of DPM emissions from proposed haul truck trips within Ventura County with the use of a health risk assessment (HRA), please see the response to comment 160-2. With regard to the impact of DPM emissions from proposed haul truck trips within the San Fernando Valley and South Coast Air Basin (SCAB), DOE notes that due to revisions in the proposed scheduling of soil remediation activities, the average heavy-duty truck round trips per day evaluated in this Final EIS was reduced to 16 from 32 to 48 in the Draft EIS. The air quality analysis in Final EIS Chapter 4, Section 4.6.4.2 estimates that during a peak year of activity (2021), unmitigated DPM emissions generated by a 2021 average California truck fleet within the entire South Coast Air Basin analysis domain under the nearby disposal site scenario would amount to less than 31 pounds per year, or about 0.4 pounds during a peak day (based on 32 heavy-duty truck round trips per peak day) (Leidos 2018b; Tables 1.A-23 and 1.A-24; [DPM is about 20 percent of the PM10 values in these tables]). These emissions would occur over about 160 miles of roadway within the SCAB. As a result, populations adjacent to roadways proposed for the transport of materials from the SSFL would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions. Given these very low DPM emissions and resulting expected impacts, it is unnecessary to perform an HRA to arrive at the same determination.

Also please see the response to comment 160-8.

**Commenter No. 160 (cont'd): Michael Villegas,
Ventura County Air Pollution Control District**

S. Jennings
U.S. Department of Energy
April 11, 2017
Page 6

For any engines utilized at the site, the BACT analysis would include a review of any applicable California Air Resources Board (CARB) Air Toxics Control Measures, U.S. EPA National Emissions Standards for Hazardous Air Pollutants (NESHAP) for stationary reciprocating internal combustion engines (RICE), as well as air district rules for internal combustion engines.

If storage tanks are used in the clean-up operation, the BACT analysis may include compliance with VCAPCD Rule 71.2, *Storage of Reactive Organic Compound Liquids*.

Excavation operations would be required to comply with VCAPCD Rule 55, *Fugitive Dust*. In the interest of implementing the best management practices to minimize dust, the applicable provisions of South Coast Air Quality Management District (SCAQMD) Rule 403, *Fugitive Dust*, should also be implemented.

The VCAPCD Air Toxics Review of Permit Applications policy will require a Health Risk Assessment for the soil clean-up operation, prior to granting a Permit to Operate.

General Comments on Haul Truck Emissions

VCAPCD staff has reviewed Tables 5-3 and 5-4 on pages 5-18 and 5-19 of the EIS Summary. It would be beneficial for us to have the fuel use and number of potential truck trips in Ventura County, along with information on the emission factors utilized (as opposed to references to CARB and EPA documents). This information will assist us in reviewing the potential impacts from the trucks based on the Health Risk Assessment.

Sincerely,



Michael Villegas
Air Pollution Control Officer

c: Ventura County Air Pollution Control Board

160-8
cont'd

160-9

- 160-4 As noted in the preceding response, DOE does not believe it is necessary to perform a quantitative health risk assessment of impacts associated haul trucks. However, a discussion of potential cumulative impacts on human health for an onsite or offsite resident or recreational user from DOE, NASA, and Boeing remediation activities was added to Section 5.5.9 of this Final EIS. The risks for residential exposure scenario in Area IV were calculated assuming the exposure was for 24 hours per day, 350 days per year, for 26 years. The 350 days per year assumes the resident is traveling away from home 2 weeks per year, and the 26 years is the assumed time the a resident will live on the same property. That doesn't leave any time for exposure on an adjacent property. Although the recreational user's time on site is not nearly as much as that for a resident, the assumed exposure time of 8 hours a day, 75 days per year, for 26 years for recreational activities (e.g., hiking) is sufficient to address the total recreational exposure, regardless of which area is being traversed. (Any time spent on adjacent property subtracts from the time available on the Area IV property.) The cumulative risks to the recreational user from exposure both onsite and offsite should be no greater than the recreational user risks presented in Chapter 4, Section 4.9, Table 4-63. Estimates of the offsite residential risks from the combined DOE, NASA and Boeing activities was qualitatively evaluated The offsite impacts shown in this SSFL Area IV EIS for DOE remediation activities (see Table 4-63) would be three to eight orders of magnitude below an acceptable cancer risk range of 1 in 10,000 to 1 in 1 million. Impacts to offsite individuals from NASA and Boeing remediation activities would be expected to be in a similar range.
- 160-5 Regarding the need (1) to substantiate the conclusion that proposed dust measures would ensure that proposed activities would not contribute to an exceedance of a PM10 ambient air quality standard at any offsite location, (2) to assess potential fugitive dust impacts with the use of air dispersion modeling, and (3) to apply additional fugitive dust control measures to the proposed activities, please see the response to comment 160-2. This response discusses an unmitigated scenario that would include implementation of a variety of fugitive dust control measures (minimization measure 6-1) and it also identifies the mechanism to apply further controls (mitigate) if there is any noticeable increase in emissions. DOE is committed to complying with the VCAPCD Rule 55 regarding control of fugitive dust and the ambient PM10 standards.
- 160-6 Cumulative impacts on air quality (including to ambient PM10 levels) and climate change from DOE, NASA, and Boeing remediation activities are addressed in Chapter 5, Section 5.5.6 of this Final EIS.

Commenter No. 160 (cont'd): Michael Villegas,
Ventura County Air Pollution Control District

- 160-7** Given that the project schedule to begin soil remediation activities has been delayed about 2 years to 2021 (compared to the schedule in the Draft EIS), there would be many more pieces of Tier 4 equipment available in the California equipment fleet. Therefore, Mitigation Measure AQ-1 was revised in this Final EIS to include as a goal that off-road equipment have engines that comply with the EPA Tier 4 non-road emission standards.
- 160-8** Chapter 8, Section 8.1.5 of this Final EIS states that air emissions from the proposed cleanup activities would be regulated by the VCAPCD and Table 8-3 identifies potential VCAPCD rules that would apply to the proposed cleanup activities. Table 8-3 in this Final EIS was revised to include the additional VCAPCD rules identified in the comment. The EIS air quality analysis assumes that mainly mobile sources of combustive emissions (e.g., construction equipment, trucks, etc.) would be used for the proposed cleanup activities. These sources would not require a VCAPCD permit to operate. Nevertheless, contractors that take part in the cleanup activities would have to operate all emission sources in compliance with their applicable VCAPCD rules and regulations. This would include potentially obtaining permits to operate stationary sources, such as diesel-powered generators. This EIS states that the proposed cleanup activities would have to comply with VCAPCD Rule 55 – Fugitive Dust (Section 4.6.4.1). In EIS Table 6-1, Minimization Measure 6-1 identifies techniques that DOE would implement to minimize fugitive dust emissions and to comply with Rule 55. This measure has been updated to include applicable control measures identified in SCAQMD Rule 403. DOE does not feel a health risk assessment is needed for this EIS, but, as necessary to obtain a Permit to Operate, DOE will develop a Health Risk Assessment.
- 160-9** Emission factors and truck trips used to estimate emissions in this Final EIS for the four combinations of action alternatives evaluated for air impacts are presented in Attachments 1.A, 1.B, 1.CRez, and 1.C-OS of the reference, EIS for Remediation of Area IV and the NBZ of the SSFL – Final Air Emissions Calculation Methods (Leidos 2018b). Emission factors developed to estimate the implementation of Mitigation Measure AQ-1 are provided in Attachment 1.D. Data used to estimate emissions from the SSFL cumulative projects are provided in Attachment 1.E. Data used to estimate fuel usages for the four combinations of action alternatives are provided in Attachment 1.F. Regarding the need to assess potential TACs impacts from trucks with the use of an HRA, please see the responses to comments 160-2 and 160-3.

Commenter No. 161: Liza Tucker,
Consumer Watchdog



April 12, 2017

Ms. Stephe Jennings

NEPA Document Manager

SSFL Area IV EIS

U.S. Department of Energy

4100 Guardian Street, Suite 160

Simi Valley, CA 93063

Re: *Comments on Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory*

Dear Ms. Jennings:

Consumer Watchdog is deeply troubled by the draft EIS that DOE has issued for the cleanup of the parts of the Santa Susana Field Laboratory for which it is responsible.

In 2010 DOE entered into a legally binding Administrative Order on Consent (AOC) requiring cleanup to background. In 2012 DOE promised that any EIS would be limited to alternative ways to carry out those requirements. It has now broken both commitments.

All alternatives in the draft EIS violate the AOC. All alternatives are outside DOE's authority, as it is legally bound by the AOC and by the state's regulatory authority. Polluters don't get to decide how much of their pollution to clean up.

We are also concerned by ambiguity in the draft EIS as to the demolition of structures and disposal of resulting debris. The AOC requires cleanup to background and includes in that requirement structures, debris, and anthropogenic materials. It further requires disposal of all waste with radioactivity above background at licensed low-level-radioactive-waste sites. The draft EIS seems to suggest that the proposed cleanup may not fully comply with those requirements. We would strongly oppose any effort by DOE to break out of those requirements of the AOC as well.

Sincerely,

Liza Tucker
Consumer Advocate

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- 161-1 DOE acknowledges your preference for cleanup in accordance with the 2010 AOC. Regarding the comment that all alternatives violate the AOC, refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD, which describes how the Cleanup to AOC LUT Values Alternative incorporates technical elements of the AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. As new data has become available, DOE has considered those data and adjusted its thinking and evaluations accordingly; including in regard to the alternatives that needed to be evaluated in the EIS. For example, DOE's understanding of the implementability of cleanup in accordance with the 2010 AOC has evolved since 2012. As discussed in Chapter 2, Section 2.3, of this Final EIS DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC. As a consequence, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the health and safety of the public and the environment. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this Final EIS. This latter use of a risk assessment approach for soil cleanup in these two alternatives is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.
- 161-2 DOE recognizes DTSC's authority with respect to the AOC and the Resource Conservation and Recovery Act. DTSC's authority and role in cleanup of Area IV is discussed in Chapters 1 and 2 of the EIS.
- 161-3 As presented in Chapter 2, Section 2.5 of this Final EIS, all DOE structures would be removed under the Building Removal Alternative and disposed of in accordance with applicable laws and regulations and the acceptance criteria of disposal and/or recycle facilities. Chapter 2, Section 2.5 and Appendix D were revised to clearly indicate waste from structures/facilities with a radioactive history is assumed to be radioactive. Regardless of its history, each DOE building in Area IV would be surveyed in accordance with an approved survey plan to determine the disposition of building materials during and after demolition.

Commenter No. 161 (cont'd): Liza Tucker,
Consumer Watchdog

161-4 It is DOE's preferred alternative to remove all 18 of the DOE buildings, including foundations and subterranean structures from Area IV. Any residual radioactivity that may remain in the soil near or under the DOE buildings would be addressed as part of soil remediation activities. DOE will comply with all applicable requirements for removal and disposition of building materials.

Commenter No. 162: Mark B. Oskow and David A. Weeshoff,
San Fernando Valley Audubon Society



San Fernando Valley Audubon Society
Incorporated as California Audubon Society 1913
P.O. Box 7769 Van Nuys, CA 91409-7769

"For nature education and the conservation of wildlife"

April 11, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U. S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063
Via portal at <http://SSFLAreaIVEIS.com>

Re: San Fernando Valley Audubon Society Comments on the Draft
Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone
of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS) (DOE/EIS-0402)

Dear Ms. Jennings:

INTRODUCTION

The purpose of this letter is to provide comments on behalf of the San Fernando Valley Audubon Society (SFVAS) regarding the U. S. Department of Energy Draft Environmental Impact Statement (DEIS) on the Remediation of Santa Susana Field Laboratory (SSFL) Area IV and the Northern Buffer Zone.

BACKGROUND

SFVAS INVOLVEMENT

SFVAS, founded in 1906, is an approximately 1800 member chapter of the National Audubon Society organized as a charity under Section 501(c) (3) of the Internal Revenue Code. The chapter boundaries include the zip code areas comprising the SSFL. SFVAS has been actively involved in conserving bird life and their habitats since its founding more than one hundred years ago. More recently, SFVAS has been attempting to conserve birds and their habitats at SSFL, as well as assuring that the site is remediated in a reasonable manner that is protective of public health and other positive values. To these ends, SFVAS established a scientific program of bird monitoring at the lab in 2011 that is continuing. In addition to bird banding, the program includes regular censuses of birds throughout the site, including Area 4 and the Northern Buffer Zone (NBZ). As the representative of SFVAS, the first author of these comments has participated in almost every meeting of the former Public Participation Group organized by the Department of Toxic Substances Control (DTSC) and the several technical advisory groups under the auspices of the Environmental Protection

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Commenter No. 162 (cont'd): Mark B. Oskow and David A. Weeshoff,

San Fernando Valley Audubon Society

Agency and the responsible parties, the Soil Treatment Investigation Group, and attended the educational program known as the Groundwater University. The first author is currently a Section 106 consulting party. SFVAS has submitted comments during meetings and field visits and written comments concerning a number of documents; such as the National Aeronautics and Space Agency's (NASA's) Draft Environment Impact Statement concerning the remediation of NASA's areas of responsibility at SSFL.

In addition, SFVAS members have visited the site, often including Area 4 and the NBZ, for recreational and educational purposes, as well as in connection with the bird monitoring program. Activities have included a portion of the SFVAS annual Birdathon (a twenty-four hour period of competitive effort to maximize bird observations among competing groups), bird walks, hikes, tours, and other events organized by The Boeing Company. The first author has also led educational tours at the site for college classes. All of these activities are as unpaid volunteers, as befits a charitable organization.

ENVIRONMENTAL CONCERNS

As noted above, SFVAS has been involved in the conservation of birds and their habitats for over a century. However, events of recent years have added levels of urgency to conservation needs in the San Fernando Valley area as spreading development continues to chew up the last remaining open spaces surrounding the valley. SSFL is one those spaces now under the most serious threat from unnecessary and potentially destructive remediation activities. These activities mostly fall under the aegis of the Administrative Order on Consent (AOC) issued by DTSC and signed by the DOE under considerable pressure from certain elected officials and their supporting pressure groups.

PUBLIC HEALTH CONCERNS

For a variety of reasons, Americans have a heightened awareness about chemicals (including radionuclides) in the environment as having potential adverse impacts on health, including cancer. Such concerns are not necessarily exaggerated. However, they must be placed into a proper context, and assertions about *particular* relationships between chemical contamination and health impacts must be adequately documented according to sound scientific principles relating cause to effect.

As a first consideration, the background within which health impacts are occurring (or have occurred) must be taken into account. We live in what has been described as a "sea of carcinogens." These exist as products of human activity in our air, water, food, household products and furnishings, toys, building materials, streets and highways, vehicles and their emissions, and so on.

However, there are many more natural agents of cancer in our air, water, and food. Articles have been written about the contribution of carbon-14, a naturally occurring isotope of carbon, to cancer rates. Potassium 40, a naturally occurring isotope of potassium accounting for almost fifty percent of the element's abundance, may also be implicated with lower probability. The DEIS properly mentions these isotopes as possible carcinogenic agents. Naturally occurring radiological material (NORM), such as uranium, is also common in some areas, as at SSFL Area 4 and the NBZ. Radon, an inert gas that is radioactive, is common in many areas of the San Fernando Valley, and is responsible for most of the

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Commenter No. 162 (cont'd): Mark B. Oskow and David A. Weeshoff,
San Fernando Valley Audubon Society

background radiation nationwide to which people are exposed.

Naturally occurring carcinogens are common in food. For example, hydrazine is found naturally at high levels in mushrooms. Bruce Ames, the inventor of the Ames test, has documented hundreds of such substances in food at levels at or higher than found in the surrounding environment, and he has written dozens of scientific, peer-reviewed papers on the subject (for example, Ames, 1998). Ames and collaborators issued a news release (available at http://www.berkeley.edu/news/media/releases/97legacy/11_01_97a.html) concerning the exaggerated impact of synthetic chemicals in the environment causing cancer (Sanders, 1997). This is but one of many dozens of such studies produced on the subject.

Closer to home, the western San Fernando Valley potable water supply, which consists almost exclusively of water imported from the Los Angeles Aqueduct or from the California Aqueduct, contains cancer causing substances, both naturally occurring and otherwise. These include arsenic and, until several years ago, relatively high levels of carcinogenic trihalomethanes (THM's), by-products of chlorination, found in the Valley Circle Boulevard area of West Hills, a neighborhood not far from SSFL. Until approximately fifteen years ago, the potent carcinogen, N-nitrosodimethylamine (NDMA) may have been present in drinking water originating from the California Aqueduct, the source of water provided to the San Fernando Valley at times via connections to Metropolitan Water District. Furthermore, it is well known that wildfires in the Los Angeles/Ventura County area produce large quantities of dioxins and other carcinogens. Such fires are frequent in the area. Additional fires resulted from the Northridge Earthquake and the 1992 Los Angeles riots. A particular problem for Southern California in general has been the prevalence of backyard barbecues, which produce airborne carcinogens and changes in barbecued food that have been linked to cancer when consumed.

In addition, some biological agents, such as viruses and fungi, may also cause cancer. It is estimated that 15 to 20% of cancers are caused by viruses, such as the human papilloma virus. (University of New South Wales, 2017; available at <https://www.rcpa.edu.au/getattachment/8b3fba52-ecb5-4a6b-9788-62b6bc5e7536/How-do-Viruses-Cause-Cancer.aspx>.) A recent study by Caparaso (summarized by Miller, 2017; available at <http://www.livescience.com/58504-how-time-zones-may-affect-cancer-risk.html>), found that increasing distance from the eastern boundary of a time zone is correlated with increasing cancer risk. Injuries may also initiate sequences of events leading to cancer. Some pharmaceuticals have also been implicated as carcinogens. Similar lines of reasoning apply to many other adverse impacts thought to be caused by environmental agents (or, in some cases, the lack thereof; such as, in hypothyroidism resulting from a deficiency of iodine in the diet).

Regardless of the plethora of potential environmental agents that can cause cancer, heredity must also be considered. There is a known hereditary basis for some forms of certain cancers, in particular for retinoblastoma, neuroblastoma, breast cancer, and a few others. Merely finding a cluster of a particular cancer is not evidence, in itself, of an environmental cause, and clusters themselves must be carefully defined in order to demonstrate that they are not simply random occurrences. Proper application of inferential statistics in such analyses is critical in such instances. The *post hoc* re-calculation by Morgenstern (2008) of the probability that a *selected* group of retinoblastoma instances in the western San Fernando Valley constitutes a "cancer cluster" is an example of the abuse of

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Commenter No. 162 (cont'd): Mark B. Oskow and David A. Weeshoff,
San Fernando Valley Audubon Society

fundamental principles of statistical inference (commonly referred to as “cherry picking” data). In this case, Morgenstern selected a group of years from a restricted region in which retinoblastoma cases occurred and compared the probability of their occurrence to a much larger grouping of years and regions in which cases both occurred *and* did not occur to draw the conclusion that the selected data represented a cluster in contrast to the previous conclusion of the California Cancer Registry. In so doing, Morgenstern ignored the years during which retinoblastoma cases did not occur. Those years of zero occurrences of retinoblastoma in the target area cannot be simply or legitimately dismissed as irrelevant. Such restricted selection of data violates principles of random and independent sampling upon which inferential statistics are based. These types of poorly executed applications of statistics must be firmly rejected.

Cancer may also be initiated via viral mediation transmitted through sexual contact or through blood transfusions. A review article in *Wired* magazine (Wolverton, 2013; see https://www.wired.com/2013/05/al_argcancer/) suggested that the vast majority of cancers are caused by accumulated random mutations in DNA occurring during normal cellular division, and have nothing to do with hereditary or environmental factors. A recent article in the *Los Angeles Times* (Healy, March 24, 2017) gave additional appropriate attention to this unfortunate truth while the molecular biological basis of the issue is dealt with in research papers by Tomasetti and Vogelstein (2015) and Tomasetti *et al.* (2017). The *Times* article is particularly germane with respect to childhood cancers, which generate enormous concern and correspondingly intense emotional reactions on the part of parents with children victimized by cancer. The author states, “The new research also finds that childhood cancers appear almost entirely driven by randomly occurring mutations.” This is cold comfort to a parent who has lost or is caring for a child with cancer. However, it underlines the principal that the cause of a cancer in an individual case must be carefully determined according to sound scientific principles. Forcing blame on relatively distant events at SSFL in both space and time is not conducive to creating an understanding of cancer causation, nor does it advance efforts to improve diagnoses or treatments, not only of cancer but of other conditions as well.

Furthermore, even if an environmental cause can be inferred, after other potential causes are ruled out, it is more likely that the actual cause originated from a more proximate and widely encountered common source, such as the potable water supply, than from distant wind-blown or random encounters with contaminants, especially when there is no evidence that actual wind-blown contaminants were disseminated in the area or where actual evidence of exposure is lacking. The mere finding, for example, that the wind blows over SSFL from particular directions more frequently than from other directions initially towards a particular area of concern may be interesting, but it is not evidence that something in the wind caused cancer in that area. Direct evidence originating from the area of concern demonstrating that winds actually blowing over that *particular* area arise from the direction of SSFL is needed. In addition, evidence is needed that either contaminants are being deposited in the area or that the air in the area has unhealthful levels of suspect contaminants in it and inhalation of it is unavoidable at the relevant elevations. No such evidence has been produced. One could construct a large, if not infinite, number of wind rose scenarios demonstrating winds blowing over from other facilities in the San Fernando Valley where carcinogens might have originated. None of these would be considered reliable evidence that something in the wind has contributed to cancer in areas downwind. Furthermore, those same winds, including those blowing over SSFL, are likely to blow over many areas where no evidence of increased

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162-1

Thank you for your comment. It has been included in the Administrative Record for the EIS. Please refer to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 162 (cont'd): Mark B. Oskow and David A. Weeshoff,
San Fernando Valley Audubon Society

cancer incidence, cancer clusters, or other adverse health impacts have been found. In fact, such winds typically blow over areas where there is *reduced* cancer incidence! One need only to examine the map illustrating the instances of retinoblastoma in the San Fernando Valley in Morgenstern (2008, slide 12, attributed to the Los Angeles County Cancer Surveillance Program) to see that this is true.

On the other hand, water running off from SSFL is confined to certain, mostly inaccessible, channels. It is not used as a potable water source and does not contribute to groundwater used as a potable water source. Moreover, there are no contaminants found in surface water run-off leaving the SSFL that are found at unhealthful levels, as indicated by recent data collected at outfalls. Surface water run-off is strictly regulated by the Los Angeles Regional Water Quality Control Board pursuant to the National Pollutant Discharge Elimination System.

Given these facts, there is simply no basis for inferences that contaminants at SSFL have caused cancer, or any other illness for that matter, in nearby communities. Assertions that they do are a grave disservice to our communities, in that they freeze efforts to investigate the actual causes of cancer (or other ailments). As an additional consequence, much needed resources that might otherwise be used for such investigations are diverted to beating up the "straw man" of SSFL. To make matters worse, resources that are badly needed for the remediation of contaminated DOE sites in other parts of the country will be squandered on an unnecessarily strict clean-up at SSFL that will actually increase adverse health and environmental impacts.

ECOLOGICAL EVIDENCE CONCERNING ABSENCE OF CANCER IMPACTS FROM CONTAMINANTS AT SSFL

In addition to what has been described in the preceding section, there are several lines of evidence from ecological conditions observed at SSFL that argue forcibly against drawing any inferences suggesting that contaminants there are now causing cancers either on the site or in surrounding communities.

Avian studies and considerations

- The first of these, and perhaps the most important, derives from nearly six years of intensive study of bird life at SSFL by SFVAS. When planning for the study began in 2010, the horror stories about horrendous contamination present there from radionuclides, dioxins, PAH's, PCB's, TCE, perchlorate, etc. were (as they still are) making the rounds. Early expectations were of finding relatively large numbers of dead, dying, weak, or mutant individuals, as well as an avian community depauperate in terms of species and numbers. In fact, documentation and quantification of such findings was desired and formed part of the rationale for initiating the program. Follow-up studies were envisioned for sampling avian tissues to test for suspected carcinogens or other chemicals that might be related to those findings in order to home in on the causes so that solutions could be appropriately tailored. But, as time went by, it became obvious that the avian assemblage was quite normal for the types of habitats in the area. Surprisingly, there was not *any* evidence of adverse impacts from contamination on birds. This is not a question of comparing cancer, mutation, or tumor rates at SSFL with more pristine

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162-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. Please also refer to Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

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162-3 Thank you for the information regarding your observations of wildlife within SSF and for providing your conclusion that you have seen no adverse impacts from SSFL contamination on the wildlife at SSFL. It has been included in the Administrative Record for the EIS.

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Commenter No. 162 (cont'd): Mark B. Oskow and David A. Weeshoff,
San Fernando Valley Audubon Society

environments. It is a question of realizing that there are none that present any observable symptoms; that is, zero, zilch, nada.

- Coincidentally, more and more published data were encountered about levels of certain contaminants found in birds ranging from the high Arctic to Argentina and points in between. While the vast majority of these studies found no impact on avian populations, reproduction rates, behavior, morphology, or other parameters, there are significant exceptions. One very well-known example is the impact of selenium intoxication on birds nesting at Kesterson National Wildlife Refuge, where embryos, hatchlings, and young birds were found to have all sorts of mutations -- so much so that refuge managers had to scare birds away from the area to avoid further impacts. There are a number of other such conclusive studies. Recently, a toxic pit filled with acidic copper mining waste in Montana has been in the news for causing acute avian mortality. The point is that, if unusual mortalities, mutations, or other adverse impacts to birds from contaminants at SSFL were occurring, they would have been detected.

Birds have been well known for centuries as sensitive environmental monitors. The "canary in the coal mine" is the classic example. In addition, it is not well-known, but, like humans, birds suffer from a variety of cancers and tumors, as listed below.

- Cancers unique to birds – these include air sac carcinomas, and cloacal cancers.
- A broad array of internal cancers – those found in kidneys, liver, stomach, glands (ovary, testicle, thyroid and pituitary), muscles or bones.
- Squamous cell carcinoma – or skin cancer, usually appears on the wing tips, toes, and around the beak and eyes.
- Papilloma –benign skin tumor, usually due to viral infection. Occurs on the skin or in stomach lining. Can develop into cancer.
- Fibrosarcoma –cancer of the connective tissues, is a growth over a long bone, often seen in the leg or wing, usually in parrot species. When cancer grows, the skin over it may ulcerate, (to the bird's picking at it), or it may spread to other organs (metastasize).

Overall cancer and tumor incidence in humans is, of course, age-related. A similar consideration is that many birds, especially parrots, raptors, and some others are among the longest living terrestrial creatures. Parrots have been known to live well over 100 years. However, even tiny birds, such as some species of hummingbirds found in the Simi Hills can live 5 to 10 (or longer) years, despite most having to endure the hazards of migration twice every year. That life span is more than enough time for many cancers to develop, and birds do not necessarily succumb to cancer quickly any more than humans do. Furthermore, for most species, the affected individuals will have likely produced offspring to which they have passed on whatever genetic predispositions towards cancer they might be carrying. Therefore, barring environmental effects, cancer rates should remain relatively stable over time scales shorter than those where evolutionary selective drivers would come into play. Such factors make it possible to determine whether cancer rates are changing in a given area, where environmental contaminants may be having an impact.

Consider the logic of the argument. As some people testified at the two DOE hearings on the DEIS, infant children (less than a few years old and some one year old or less) in our

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Commenter No. 162 (cont'd): Mark B. Oskow and David A. Weeshoff,
San Fernando Valley Audubon Society

region have developed neuroblastoma or retinoblastoma, although that is, thankfully, rare. On the other hand, childhood leukemia is a major killer of young children, with approximately 16,000 cases per year diagnosed in the U. S. (Assuming rough population proportionality, approximately 160 cases would be expected in the City of Los Angeles/Ventura County area, with roughly one percent of the U. S. population, and approximately 40 cases each year in the San Fernando/Simi Valley area, assuming one fourth of the regional population. This may seem like a small number, but, after several years or more, these numbers add up. The result is that children with leukemia are not particularly rare, including those with the rarer forms of the disease. The region has specialty hospitals for the care and treatment of children with cancer; for example, St. Jude's Hospital.) Other cancers occur with lower frequencies in very young children. Up until relatively recently, most of these children would have died very young. The obvious inference to be drawn here is that cancer can develop in very young animals, be they humans, rats, horses, beavers, bears, or birds -- you name it. In spite of alarmist pronouncements to the contrary by certain speakers at the hearings, cancer does not even need one year to develop. Advances in diagnostics have increased the likelihood of detecting cancer in its early stages or at all and have also facilitated the ability to ascribe cancer origins to the appropriate organ tissues even after metastasis has occurred.

As implied above, it is axiomatic that birds are more sensitive than humans to most environmental contaminants. This is partly due to the life styles of wild birds and partly to their physiological characteristics, which include very high metabolic, heart rates, respiration rates, body temperatures, blood pressures close to the physiological maximum, and others related to their high energy needs. It should be easy for any open-minded individual to realize that, in contrast to humans, birds are in intimate and unavoidable contact with the stark realities of their natural environment every second of every day. They walk, hop, and run barefooted whenever they are on the ground or in contact with any other substrate. They drink water and eat food where they can find it opportunistically. They do not have the luxury of careful food selection. They nest, lay eggs, and raise their young where nest sites are available. They have no other option. There is no "clean" refuge to which they can flee, no nutritional experts to tell them what to eat, no labels on their food to inform them of possible harmful substances they might consume, no potable water from which to drink (except where humans have provided it), no refuge from air or water pollution. There are no signs on their water sources telling them whether it is safe to drink, nor on their nest cavities to inform them of the presence of toxins. They have no way of knowing whether the dirt they are scratching in for seeds or insects contains toxins or carcinogens, or whether the worm or mouse they just ate lived its short life in contaminated soils. Furthermore, it is well known that many toxins, including carcinogens, accumulate and many of those magnify up the food chain. All birds are consumers in the ecological sense, and many are top predators. One need only to think honestly about this in order to understand why birds are more sensitive to toxins, even without considering of their physiological predispositions.,

After four years or so into the study, a summary of findings was released to the public via brief articles in the San Fernando Valley Audubon Society newsletter, the *Phainopepla*, (Osokow, 2014a; Vol.65, #4, Aug.-Sept. 2014) and, subsequently, through the SSFL CAG on August 1, 2014 (see CAG web page at <http://ssflcag.net>, August 1, 2014). The principal finding was that there was no evidence of adverse impacts on birds from SSFL contaminants. The impact of the drought on bird numbers was later summarized and those findings, which documented the severe impact from drought, was made available to the public via the same

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newsletter (Osokow, 2014b; *Phainopepla*: Vol.65, #5, Oct.-Nov. 2014). Later, the foldout brochure on the birds of the SSFL, documenting our observations of bird species, was created (Dunn and Osokow, 2016). That brochure registers a full complement of birds present on the site – now consisting of 138 species, a substantial number considering the absence of large or permanent water sources at SSFL.

Food web evidence

However, there are additional lines of evidence of the lack of impacts of contaminants on wildlife at SSFL that take into account a variety of other observations. Perhaps the most obvious and important is the presence of a fully functioning food chain -- beginning with a healthy diversity of vegetation fed upon by a host of invertebrates, mammalian herbivores (including squirrels, pocket gophers, harvest mice, wood rats, deer, and others), and birds. Then, there are a variety of middle level predators (such as snakes, salamanders, lizards, frogs and toads, raccoons, skunks, and more bird species). Further up the food chain, there are the top predators (including coyotes, gray fox, bobcat, mountain lion, and raptors). The area is as rich with wildlife as almost any in Southern California. It is a fully functioning ecosystem harboring rare, threatened, or endangered species. It is an area offering great potential for the study of wildlife, ecosystem structure, function, and other ecological topics – some of great importance to understanding human impacts on the environment, including ecosystem responses to contaminants.

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Evidence from burrowing animals

An additional line of evidence for a lack of impact from contamination comes from the observation of an abundance of burrowing animals. This includes, among others, rabbits, ground squirrels (a population apparently recently decimated by drought but now rebounding), pocket gophers, harvest mice, and the snakes that consume them. These animals live and breathe underground most of the time. They, literally, eat dirt. By their continual burrowing, they churn and mix the soil, seeds, detritus and whatever else is in the soil. If there were impacts from contaminants in soil, wouldn't their populations be affected? But, the simple fact is, these animals thrive at SSFL. Small mammal burrows can be found even in the supposedly most contaminated areas, as determined by extensive soil testing. Furthermore, if contaminants impacted these species, we would likely see impacts further up the food chain. But, as noted earlier, we don't see that either.

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Evidence from amphibian abundance

The last line of evidence discussed here concerns the abundance of amphibians in SSFL ponds. Silvernale Pond is the largest and easiest to observe. It receives run-off from contaminated areas, including Area 4, throughout its catchment. Every spring, when there is sufficient water, thousands, possibly tens or even hundreds of thousands, of tadpoles, primarily of California toads and pacific chorus (tree) frogs can be seen in this and other ponds at SSFL. (Notably, this year thousands of tadpoles are being seen in Bell Creek, which drains from Area 4.) Amphibians are generally regarded as the taxonomic group most sensitive to environmental contaminants in aquatic environments, because they live in intimate contact with the water and sediments of their homes and must take oxygen from the water by way of gills or porous skin that allows contaminants in the water to pass directly into the bloodstream of these animals. A large number of studies have demonstrated a

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connection between contaminants in water or sediments and mutations in amphibians. Silvernale Pond is visited two or three times per month by SFVAS observers as part of the bird monitoring program. During those visits, efforts are made to find mutant amphibians in season. Although we do not claim to be performing a systematic study there, we can state that no mutated individuals have ever been found. This is so, despite the fact that the sediments are known to have what some would consider to be relatively high levels of contaminants. In addition to the lack of mutations, observation that these populations continue to thrive and are reproducing by the (tens of) thousands annually is incontrovertible evidence that contaminants are not causing harm to these species. There can be little doubt that discharges from these ponds or run-off from the site does not harm humans, which do not drink or have any other contact with these waters, living or working miles away or even at the site.

PUTTING IT ALL TOGETHER

Based on the foregoing, it is clear that the impacts of environmental contaminants at SSFL, including those alleged to contribute to cancer, have been greatly exaggerated. The upshot of this is that, pursuant to the AOC, DOE may be about to engage in very destructive clean-up activities that, at the very least, will devastate wildlife habitat and prevent recovery for decades by, among other impacts, outright destruction of vegetation, bird nest sites, burrows, animal themselves, and removing irreplaceable topsoil. Furthermore, at the very least, it will cause substantial inconvenience and hazard to communities on the eastern side of the Simi Hills adjacent to SSFL to appease human health concerns that are entirely spurious. There will be a heavy increase in truck traffic along already congested thoroughfares in West Hills, Woodland Hills, Canoga Park, and Chatsworth that are becoming even more congested day by day as numerous residential and commercial developments are built, including a massive development on the old Rocketdyne site at Canoga Avenue and Victory Boulevard to include 2,500 residences, a number of smaller developments, and the even more massive Promenade 2035 development fronting on Topanga Canyon Boulevard, a principal route to U. S. 101 from SSFL, now in the planning stages.

As a result, serious vehicle accidents involving trucks from SSFL transporting highly concentrated toxic wastes through these neighborhoods become ever more likely. A single spill from a truck carrying concentrated radiological waste through these areas would cause havoc similar to that of a "dirty bomb," while the likelihood of fatal vehicle collisions or pedestrian deaths, including those of small children on their way to or from school, playgrounds, or houses of worship, would far exceed any theoretical impacts from cancer or other health impacts from contaminants on the site. At the same time, emergency vehicles will be subjected to increasing delays, thereby jeopardizing the timely rescue of victims needing rapid attention, and the severely limited emergency routes available for the public to escape disasters (such as earthquakes) will be in gridlock. Furthermore, an accident involving the spill of hazardous waste carried by these trucks could severely impact the Los Angeles River directly or via one or more of its tributaries with unpredictable effects on birds and other wildlife using these streams. These impacts to communities through which contaminants are to be transported are casually and euphemistically referred to as an "increase in traffic" by supporters of the AOC. However, it is clear that such activities will seriously impact these neighborhoods for ten years or more, if the AOC is implemented. A number of SFVAS members, including the first author, live adjacent to the probable routes.

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- 162-4 DOE acknowledges your preference for an alternative that minimizes the impact on wildlife habitat. In addition to the information in Section 2.1, Preferences for a Cleanup," please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD. DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. The EIS evaluates alternatives to accomplish these tasks, and each alternative addresses the potential impacts that implementing the alternative could have on several resource areas, including human health and safety, biological and cultural resources, ground- and surface water resources, air quality, and traffic. As discussed in Chapter 1, Section 1.7, of the EIS, DOE's decision pursuant to the analysis in this Final EIS will be announced in a Record(s) of Decision (ROD[s]) that will be issued no sooner than 30 days after the EPA Notice of Availability of this Final EIS is published in the Federal Register. This decision will reflect the consideration and balancing of the potential impacts on all evaluated resource areas.
- 162-5 In the EIS, DOE addresses the potential impacts that that could occur from remediation of Area IV and the NBZ on human health and other resource areas. In the case of soil remediation and using the Conservation of Natural Resources (Open Space Scenario) Alternative as an example, leaving soil containing low concentrations of chemicals and/or radionuclides on site reduces the number of truck trips from the site. But removing soil with low concentrations of chemicals or radionuclides, as would be the case under the Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site. Regarding potential traffic impacts, Chapter 4, Section 4.8.2, and Appendix H, Section H-13, documents a detailed analysis of traffic flow quality for selected SSFL-area intersections and road segments for traffic in the SSFL-area that may be attributable to DOE remediation activities. In Chapter 5, Section 5.5.8.2, of the final EIS, DOE a performed a similar analysis to analyze cumulative traffic impacts attributable to remediation actions by DOE, Boeing, and NASA. Other sections of Chapter 5 address other projects that could impact Ventura County and the South Coast Air Basin. Please also refer to the response to comment 146-78.
- 162-6 DOE acknowledges that cleanup actions and the consequential need for waste transport from SSFL would increase traffic levels on the roads in the vicinity of the site. As indicated in Appendix H, Table H-22, of this EIS, during the 2 to 3 years required for building demolition under the Building Removal Alternative, the traffic on Woolsey Canyon Road could increase during workdays by up to 5.2 percent above

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DEFICIENCIES IN THE DRAFT EIS

However, the Draft EIS is seriously deficient in not considering the impact of a major earthquake occurring during clean-up activities, including transport of contaminants through the western San Fernando Valley and along freeways or at SSFL itself. For example, an earthquake during the transport of contaminants increases the likelihood of vehicle collisions, as drivers are caught by surprise and vehicles swerve across traffic lanes or are struck by collapsing structures, such as power lines, or by flying debris, such as shattered glass. For another example, vehicles traveling on elevated highways, such as freeways, stand a chance of falling suddenly from as much as several stories of height when freeways collapse. The containers used to transport hazardous waste are designed to withstand impacts from relatively minor impacts, compared to those that might result from such a fall or other impacts caused by an earthquake.

In addition, the probability of occurrence of all accidents discussed in the previous paragraphs, as well as in the DEIS, is increased under earthquake scenarios, as is the likely severity of the impacts from any incident or combination of incidents. These possibilities must be taken into consideration when calculating vehicle accident risk and the severity of the possible incidents when evaluating the potential adverse impacts of the clean-up on the western San Fernando Valley communities and beyond. Those adverse impacts include probable increases in the incidence of cancers and other health effects to the communities adjacent to SSFL, consequences that supporters of the AOC claim to want to reduce by enforcing the clean-up standards based on the look-up table values, and to communities all along some transport routes even outside of the immediate area. The longer the period of time during which the clean-up occurs, the more likely it is that a major earthquake will occur, and the more vehicles involved in transporting wastes, the more likely it is that they will be impacted by an earthquake. Similar considerations apply to other earthquake impacts. These are not merely theoretical considerations. An earthquake is likely to occur during the remediation period. The last major earthquake affecting the San Fernando Valley was the Northridge Earthquake of 1994. That event was separated from the previous major earthquake, the Sylmar Earthquake of 1971, by approximately twenty-three years. The interval between the Northridge Earthquake and the present time has been approximately twenty-three years.

Furthermore, the adverse impacts on natural, cultural, and historical resources at SSFL will be exacerbated from an earthquake occurring during clean-up activities at the site. For example, the loosening of soils as part of an excavation process in areas in close proximity to rare or protected plant species could result in their suffocation by mobilized soils carried by wind, water, or gravity. Liquefaction may be a threat in some areas. Any such dispersion of contaminated soils due to earthquake effects complicates clean-up, increases the hazard to on-site visitors and workers, and increases costs. Streams, including Bell Creek and the Los Angeles River, ponds, and run-off in general would also be impacted by such events as a result of formerly compacted soils being loosened and mobilized.

As is clear from the above account, objections to the repercussions of the AOC are not merely about an increase in traffic, and any assertions to that effect reveal a disgraceful ignorance about what is at stake in this process. At the heart of the matter is the unnecessarily "strict" standard of soil clean-up to be imposed by the AOC. While cleaning

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baseline conditions. During soil remediation operations under the soil remediation action alternatives, which would occur after building demolition operations, the traffic on Woolsey Canyon Road could increase during workdays by about 3.3 percent above baseline conditions. The duration of soil remediation operations would range from about 2 years under the Conservation of Natural Resources Alternative (both scenarios) to 26 years under the Cleanup to AOC LUT Values Alternative. Traffic increases on other roads in the SSFL area would be smaller than those on Woolsey Canyon Road.

The additional traffic would represent a minimal increase in the potential for traffic accidents over the entire period of site remediation. This is because the accident rate is on the order of 1 per ten-million kilometers, and the distance traveled on the roads in the vicinity of SSFL (e.g., Woolsey Canyon Road, Valley Circle Boulevard, and Plummer Street) is about 8 kilometers. Note that the average fatality rate in the United States is about 1 per 100 million vehicle kilometers, per the 2015 statistics for national traffic fatalities as documented by the National Highway Traffic Safety Administration (NHTSA 2015). Therefore, no fatalities would be expected in the vicinity of the SSFL from transport of various materials from and to the site.

DOE also notes that none of the trucks would be carrying "concentrated radiological waste;" instead, cleanup of Area IV and the NBZ involves removal of materials having low concentrations of chemicals and radionuclides. The reader is referred to Chapter 3, Section 3.9.5, of this EIS for summary information on the concentrations of chemical and radioactive constituents in soil, buildings, groundwater, and contaminated bedrock. For accidents involving transport of radioactively contaminated soil from SSFL, Chapter 4, Section 4.8.1 and Appendix H of this Final EIS presents calculations of the greatest potential risks in terms of the population and individual doses that could occur from the airborne release of contaminated soil in an urban environment. As indicated in Appendix H, Section H.7.5, the maximum dose to the exposed public within a 50-mile radius, assuming the released materials became airborne, would be about 0.0064 person-rem (or 6.4 person-millirem) in the highest population density area along the transportation route. The dose to an individual potentially receiving the largest dose (maximally exposed individual) was calculated to be 0.004 millirem. This is a very small dose; by comparison, the average dose from natural background radiation in the United States is about 360 millirem per year. If the same radioactively contaminated soils were spilled into a river, because the contamination is bound within the soil matrix, the consequences would be much smaller than those resulting from a release into the air. This is because most of the materials would settle to the bottom of the streambed and any dissolved chemicals would be diluted by the water flow and become less concentrated as the river flows downstream.

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up the site to a suburban residential risk-based standard would not entirely eliminate the risks from the transport of contaminants (and uncontaminated material for that matter) to nearby communities and beyond, nor would it entirely eliminate such risks to natural, cultural, or historical resources, it would reduce the risks to more acceptable levels.

In addition, adverse impacts of the clean-up at SSFL itself would likely be far more severe under earthquake scenarios that under normal conditions.

LEGAL ISSUES

The legal reasons asserted in support of the AOC are no less spurious than those alleging current health impacts originating from SSFL. DOE has been bombarded with arguments from well-organized and belligerent proponents of the AOC claiming that DOE is bound by it and that it was signed voluntarily.

In the first case, it is questionable as to whether DOE even had the legal right to enter into the AOC. DOE is a department of the executive branch of government. It does not pass legislation. DOE's signing of the AOC has so far avoided formal legal scrutiny; however, it is likely in violation of the Supremacy Clause of the U. S. Constitution (Article VI, Clause 2; see decision by 9th Circuit Court of Appeals in *The Boeing Company v. Rafael, 2014*). It is probable that DOE is legally barred from unilaterally deciding to waive the rights of the United States. There must be a specific act of Congress authorizing such an action.

The second assertion, that the AOC was signed voluntarily, is clearly preposterous. At the time the AOC was signed, Senate Bill (SB) 990 was state law. This legislation required DOE (and the other responsible parties) to clean up their sites to a rural agricultural standard (in itself an absurd requirement, given the history of the site) and to meet other obligations or to face penalties. The AOC is built upon the legal framework of SB 990, which is mentioned in the AOC in a manner indicating that the AOC derives its authority from it pursuant to contingent changes in the California Health and Safety Code. DOE was, therefore, under the duress of signing the AOC or else face the penalties prescribed therein. SB 990 has since been found to be unconstitutional in *Boeing v. Rafael (supra)*. It is unlikely that DOE would have signed the AOC were it not for the duress of SB 990 and that presented by various elected officials promoting it. This includes the impacts of political interference from various congressional, state, and local elected officials, some of whom controlled the purse strings of DOE and other agencies, as well as exercising great influence over certain personnel decisions. The upshot of this is that the signing of the AOC by DOE can in no way be considered "voluntary."

It is worthy of note that during the entire history of the site, the City and County of Los Angeles, Ventura County, the City of Simi Valley, and all potential regulatory agencies of the State of California somehow avoided responsibility for the operations at the site in accordance with the standards they now wish to retroactively impose. Where were these entities when the site was in operation? Where was their concern and regulatory oversight? The current interest of these entities in the well-being of those claiming to have experienced adverse health impacts must, under the circumstances, be regarded with suspicion. Political expediency and economic exploitation of the responsible parties are likely the true motives, as these regulatory entities are as much responsible for any contaminated conditions at the site as the identified "responsible parties."

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162-7 DOE disagrees with the comment that this Final EIS is deficient for not evaluating the impact of a major earthquake occurring during clean-up activities. DOE acknowledges that during an earthquake, there is a higher potential for road accidents, but because of the short duration of an earthquake, these instances of increased accidents would not change the traffic accident rates that are measured over long time periods and vehicle miles traveled. Traffic accidents during an earthquake would mainly involve fender benders or other property damage. In a condition similar to the 1989 San Francisco earthquake with the partial collapse of Interstate 880, there is a potential that a transporter containing any hazardous material could be at risk of damage and release of its content. The severity of the consequences of such an accident would depend on the nature of the cargo and the conditions of the event. For accidents involving radioactively contaminated soil waste from SSFL, please refer to the response to comment 162-6.

162-8 . Rock and soil movement during a seismic event could result in direct physical injury or mortality for plants and animals and damage to cultural resources. This would be the most important concern for a seismic event and would occur regardless of any remediation activities and therefore is not discussed in this EIS. In addition, Chapter 4, Section 4.2.1.2, of this EIS, describes the potential impacts of soil erosion whether from precipitation, gravity, or wind. The impact of soil erosion from seismic activity would be expected to be similar to erosion via these other physical processes. In addition, the mitigation measures described in Chapter 6 would help to reduce any soil erosion during and after an earthquake. There are no potential liquefaction zones on SSFL (California Department of Conservation 1998, State of California Seismic Hazards Zone - Calabasas Quadrangle, Official Map, Division of Mines and Geology, February 1).

162-9 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please note that in this Final EIS, DOE evaluates two scenarios under the Conservation of Natural Resource Alternative. The first scenario reflects cleanup levels based on a suburban resident without a garden as was done in the Draft EIS. The second scenario establishes cleanup levels based primarily on a recreational user, with some constituents being further limited by ecological risk.

162-10 The commenter is referred to Final EIS Chapter 2, Sections 2.1 and 2.2 for discussions regarding the history and legality of the AOC. DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act

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SFVAS POSITION

THE DRAFT EIS

SFVAS appreciates the effort put into the DEIS by DOE to meet the requirements of the National Environmental Policy Act (NEPA). Aside from the failure to address earthquake scenarios and a few minor errors or omissions that are not dispositive, we believe the DEIS adequately represents all of the major issues and most of the minor ones; including, the site history, environmental context, purpose and need, alternatives dismissed and remaining, and impacts of the various remaining clean-up alternatives on the natural, cultural, and historical resources at SSFL. In preceding paragraphs, we have addressed some issues concerning the impacts of a clean-up on adjacent communities undertaken pursuant to the AOC. We do not believe those pertaining to truck accident potential and impacts were adequately covered in the DEIS; hence, our attention to these matters. Although, the DEIS mentions "sabotage" in passing, we must also mention here the possibility of hijacking, for potential terrorist purposes, of trucks hauling hazardous wastes, especially where radionuclides are involved. These issues are especially important as they pertain to potential contamination the Los Angeles River, which is "waters of the United States," or its tributaries from spills during transport. Such contamination could have severe consequences for the river system's environment, including that of the Sepulveda Basin and the Lower Los Angeles River, which is classified as an Important Bird Area by the National Audubon Society. (An Important Bird and Biodiversity Area (IBA) is an area identified using an internationally agreed set of criteria as being globally important for the conservation of bird populations.) The river is currently the target of planned restoration as part of the multi-agency Los Angeles River Revitalization Project. In addition, the river is becoming increasingly popular as a fishing destination, and fish from the river or its tributaries are consumed by thousands of people annually. On the other hand, significant contamination from SSFL does not reach the river or off-site segments of its tributaries, as it is captured by treatment systems and "best management practice" systems that have already been in place at SSFL for years. As noted above, this is borne out by recent analyses available from the Los Angeles Regional Water Quality Control Board.

In particular, we appreciate the honesty of the DEIS in summarizing the lack of evidence for off-site health effects and, therefore, the absence of justification for performing a clean-up according to rural agricultural or background standards; *i.e.*, the lookup table values of the AOC. Furthermore, we greatly appreciate the courage represented by the DEIS exercised in the presence of powerful and vindictive non-governmental organizations, hostile individuals, and their favored elected officials.

Based on substantial evidence from a variety of ecological and epidemiological sources, including a number of studies commissioned by various governmental agencies, there is no basis for a clean-up to a rural agricultural or background standard as a means of protecting public health. SFVAS supports a clean-up of Area IV and NBZ soils to a risk-based suburban residential standard, as described in Alternative 4, the Conservation of Natural Resources program. This is a far stricter standard of clean-up than is actually needed for a site that is to be maintained as open space with no permanent dwellings or agricultural activities. This standard provides an extra level of protection that should satisfy all but the

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(AEA). The AEA authorizes DOE to "advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety" (42 U.S.C. 7112(13)).

DTSC did not enforce SB 990 with respect to DOE, so DOE was under no duress attributable to SB 990 when the 2010 AOC was negotiated. The 2010 AOC states that DTSC agreed that compliance with the 2010 AOC would constitute DOE compliance with applicable provisions of the California Health and Safety Code (Section 1.6), including Senate Bill 990. However, after the law was declared unconstitutional, SB 990 was no longer enforceable.

162-11 Please see the response to comment 621-10.

162-12 Thank you for your comments. Please see the response to comment 162-7 and 162-8 for a discussion of the impacts from an earthquake during remediation.

162-13 Chapter 4, Section 4.8.1, of this EIS states that, because of the very low concentrations of radioactive material in the contaminated soil, building debris, and other waste addressed in this EIS, transport of these wastes would pose a very small risk to human health and the environment, even under accident conditions. In fact, the spill of an entire truck shipment (about 20 tons) of contaminated soil would not constitute a reportable quantity as defined in U.S. Department of Transportation regulations in 49 CFR 172.101, Appendix A, Table 2. Because the waste materials would contain radioactive material in such low concentrations, they would not be an attractive asset for high-jacking or use as terrorism threat.

Please refer to the response to comment 162-6 regarding the potential risks associated with an accident resulting in a spill into a river.

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most oversensitive individuals or groups or those whose true motivation has little to do with bringing about an effective clean-up of the site grounded in science.

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Concerning the demolition and removal of the remaining buildings and the clean-up of groundwater, the 2007 Agreement on Consent provides an adequate framework for these programs, and the DEIS analyzes them sufficiently. Therefore, no further comment appears needed at this time.

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162-14 Thank you for your comment. It has been included in the Administrative Record for the EIS.

CONCLUSION

In conclusion, DOE should proceed to adopt an alternative for soil clean-up specified in the EIS other than that supposedly dictated by the AOC. SFVAS favors a soil clean-up according to the Conservation of Natural Resources Alternative. We emphatically reject assertions that remediating the area according to the AOC will reduce impacts to public health. On the contrary, we believe that such a process will create additional and greater threats to public health than currently exist from the site.

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EPILOGUE

For your additional consideration, the quote below is from material provided by the Hiroshima Peace Museum:

"Today, [2011] the background radiation in Hiroshima and Nagasaki is the same as the average amount of natural radiation present anywhere on Earth. It is not enough to affect human health."

Sincerely,

ORIGINAL SIGNED

Mark B. Oskow
San Fernando Valley Audubon Society
Member of the Board of Directors,
Chair, San Fernando Valley Bird Observatory,
Special Assistant for the Santa Susana Field Laboratory
Representative to OneWaterLA Advisory Group

ORIGINAL SIGNED

David A. Weeshoff
San Fernando Valley Audubon Society
Conservation Chair

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Commenter No. 163: Abraham Weitzberg, Ph.D.

Abraham Weitzberg, Ph. D.
[Redacted]

February 12, 2017

Ms. Stephe Jennings
NEPA Document Manager, SSFL, Area IV EIS
U. S. Department of Energy
4100 Guardian Street
Simi Valley, CA 93063

Dear Ms. Jennings,

I am pleased to submit these comments on the Draft Area IV EIS, not only as a former worker, community stakeholder, and member of the SSFL CAG, but as a knowledgeable nuclear professional with almost 60 years of experience who is familiar with most of the technical disciplines involved in developing the information for the EIS and preparing the DEIS.

I would like to commend the Department for its diligence in preparing the draft which presents evaluations of reasonable remediation alternatives in strict compliance with NEPA. The technical data accurately reflects the information that has been developed in recent years and the evaluations are sufficiently detailed to allow the decisionmakers to compare the benefits, risks, and costs of the alternatives in reaching their decisions.

Two important conclusions are made that should strongly influence any public discussion of the DEIS and the eventual Record of Decision. As stated in Table 4-60 under the No Action Alternative, for a hypothetical future suburban resident, "Cancer risk and toxicity impacts from chemical and/or radionuclides in Area IV and the NBZ are comparable to or less than the risk determined for background soil." This clearly means that SSFL now poses no additional risks from soil to off-site residents, and that it is questionable whether any soil removal is necessary to protect unlikely future on-site residents under any land use scenario. It is highly unlikely that any local stakeholder would spend their own money to remove soil from their own backyard if they were told that the risk was comparable to or less than the risk determined for background soil. The expenditure of tax dollars to remove such soil from a distant site cannot be justified.

The second conclusion is that the AOC's as written are unworkable and are in need of revision. On Page S-26, DOE discusses Acceptable Error Rate and Background Data AOC LUT Failures. With the DTSC-accepted error rate in sample analysis of 5 percent, and the AREA IV 116 chemicals and 16 radionuclides of concern, DOE would likely be remediating clean soil, not just contaminated soil. Also, when comparing the background soil results with the AOC LUT values, it was found that 42 percent of the samples exceeded their respective AOC LUT values in at least one analyte. Thus, if the point-by-point, AOC remediation decision process was applied to the background study locations, they would be declared contaminated and subject to soil remediation.

163-1

163-1 Thank you for your comment.

163-2

163-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. Note that the risk assessments in this Final EIS (Section 4.9) have been revised for a better comparison of the site risks to background and expanded to include quantitative risks for both onsite and offsite exposures for all alternatives.

163-3

163-3 Thank you for your comment. It has been included in the Administrative Record for the EIS. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 163 (cont'd): Abraham Weitzberg Ph.D.

As stated on Page S-28: "DOE concluded that low AOC LUT values, coupled with the false positive issues and the inability to accurately distinguish TPH from a range of other organic molecules, resulted in data showing almost the entirety of Area IV to exceed an AOC LUT value for at least one chemical." On the same page DOE addresses the issue of replacement soil, considering onsite and offsite borrow sites for soil meeting the chemical AOC LUT values, and packaged soil products sold by home improvement stores. DOE concludes: "Based on this initial evaluation and given the low AOC LUT values, it appears unlikely that replacement soil meeting the AOC requirements can be found." The absurdity of the exceedingly low AOC LUT values should be apparent to any objective observer or decisionmaker.

The already 10-year delay in starting final remediation will extend for another several years while detailed plans are developed, approved, and funded, even if the 2010 AOCs were to be modified and lawsuits are not brought by the same parties who stopped the implementation of the 2007 agreements. There is now sufficient information to make the required remediation decisions based on this DEIS with the knowledge that SSFL is truly a somewhat contaminated industrial site that does not pose any unusual risks to the surrounding communities.

Whether or not the 2010 AOC's will be modified, it is still possible to make very justifiable SSFL remediation decisions based on the information contained in this DEIS. Based on the discussion in Section S.11.2 Potential Environmental Consequences of Combined Action Alternatives and Appendix J Cost Benefit Analysis, I reach the following logical conclusions. A clear distinction can be made between the costs, risks and benefits of the High Impact Combination and the Low Impact Combination. Because the selection of a soil remediation alternative will have no impact on Groundwater Resources these decisions are fully decoupled and may be made separately. Similarly, the Building Demolition activity is common to all scenarios except the No Action Alternative, allowing the soil decision to be made independently.

Cancer risk for all remedial action alternatives would fall within the USEPA target cancer risk range of 1×10^{-4} to 1×10^{-6} , and are therefore acceptable. Cost estimates for the remedial action alternatives range from \$468 million for the Cleanup to AOC LUT Values to \$124 million for the Conservation of Natural Resources, with \$168 MM for the intermediate Cleanup to Revised LUT Values. Because of the increased severity of the environmental impacts of either of the LUT approaches, and acceptable risk from all alternatives, there is no justification for choosing any alternative except the Conservation of Natural Resources Alternative for soil remediation.

The preferred choice for Groundwater Remediation should be Monitored Natural Attenuation, because, with the exception of the FSDF TCE plume and the RMHF Leach Field Sr-90, all of the chemical plumes will reach acceptable levels after 10-20 years of monitoring with no other action. While the Sr-90 in the bedrock will take 50-150 years to reach drinking water quality levels, it is highly unlikely that SSFL would be used as a source of drinking water in any credible scenario in the foreseeable future. The minimal risk from these groundwater plumes does not warrant any remedial action other than monitoring, even with minimum environmental consequences from such remediation.

Therefore, the DOE preferred alternative should be the Low Impact Combination of Conservation of Natural Resources plus building Removal plus Monitored Natural Attenuation. While some might suggest that the Cleanup to Revised LUT Values for soil, which removes

163-4

163-4 There are several regulatory actions that must be completed before Area IV and NBZ site cleanup activities covered by this Final EIS could begin: (1) DTSC must issue a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC must conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC would need to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC would need to approve DOE-prepared RCRA closure plans for building demolition. DOE agrees the agreements for concerning groundwater remediation and building demolition could occur before those concerning soil remediation.

163-5

163-4
cont'd


163-5 DOE acknowledges your support for the combination of the Conservation of Natural Resources, Building Removal, and Groundwater Monitored Natural Attenuation Alternatives. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

163-5
cont'd

Commenter No. 163 (cont'd): Abraham Weitzberg Ph.D.

radionuclides to AOC levels and chemicals to risk based levels, represents a reasonable compromise, I contend that no compromise is necessary simply to assuage the angst of individuals who have an irrational fear of radiation, no matter how small or close to background the dose. As a taxpayer, I believe that the Department should not waste the additional estimated \$44 million, damage the additional acres, or inflict the additional truck traffic on the surrounding communities. Choosing the Low Impact Combination is in the best interests of the future use of the site as open space, minimizing the negative effects of remediation on the environment, and avoiding the waste of taxpayer dollars.

Sincerely,



Abraham Weitzberg

163-4
cont'd

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Commenter No. 164: Henning Cohrt

From: [REDACTED]
To: [Jennings, Stephanie](#)
Subject: Comment on DOE's Draft EIS for SSFL Cleanup
Date: Tuesday, April 11, 2017 8:01:41 PM

U.S. Department of Energy NEPA Document Manager, SSFL Area IV EIS
Stephanie Jennings
[REDACTED]

Regardless of whether a causal link between the contamination of the SSFL and various cancers in the surrounding areas can be proven, the fact that such severe contamination exists in close proximity to large residential areas shall be reason enough for the DOE to ensure a thorough cleanup.

The inactivity of the DOE and others with respect to addressing this issue will only make the problem worse, and a future solution more difficult.

Therefore, neither of the alternatives proposed in the Draft EIS are acceptable.

The DOE has the moral obligation to stand by its commitment made in 2010, at a minimum.

We are the tax payers, and we demand that the taxes we pay are used to protect us from avoidable threats to our health and life.

Sincerely,

Henning Cohrt

164-1

164-2

164-1
cont'd

164-1 DOE acknowledges your concern and refers you to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences for cleanup of SSFL.

DOE disagrees with the implication that Area IV and the NBZ are severely contaminated. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

164-2 DOE acknowledges your preference for cleanup in accordance with the 2010 AOC. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent" of this CRD. With respect to the alternatives evaluated in this Final EIS Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. In addition to a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, this EIS evaluated alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 165: Christine Rowe

From: Christine Rowe
Sent: Monday, February 20, 2017 2:10 AM
To: Jennings, Stephanie
Cc: Jones, John; Kramer, Debbie; Barbara A. Lee; Leclerc, Ray; Mark Malinowski; Rainey, Laura; Rubin, Marcia; Karen.Smith; Hsu, Steve (CDPH-DFDRS-RHB); Lupo, Roger (CDPH-DFDRS-RHB); Thomas, James (CDPH-PS-DFDRS-RHB) SB 990 and the DOE Administrative Order on Consent - DOE Draft EIS Comment 1 66462_11-55903 BOEING V DTSC SB990 CR Final.pdf
Subject:
Attachments:

Dear Ms. Jennings,

Please consider this as my first comment on the DOE's Draft Environmental Impact Statement.

In order to consider the various alternatives under the DOE Draft Environmental Impact Statement (DOE DEIS) for AREA IV and the Northern Buffer Zone (NBZ) of the Santa Susana Field Laboratory (SSFL), I had to review the 2010 DOE Administrative Order on Consent (2010 AOC).

In the past few days, I reviewed a Power Point presentation by DTSC's Former Project Director Rick Brausch who negotiated the 2010 AOC with the DOE. In it, Mr. Brausch stated that the AOC:

["http://www.dtsc-sfsl.com/files/lib_pub_involve/meeting_agendas/meeting_agendas_etc/64728_AgreementsInPrinciple_09-22-10.pdf"](http://www.dtsc-sfsl.com/files/lib_pub_involve/meeting_agendas/meeting_agendas_etc/64728_AgreementsInPrinciple_09-22-10.pdf)

"Resolves disagreements over interpretations and implementation of SB 990 (Kuehl, 2007)"

I then read the Amicus Brief by the Federal Department of Justice in the case of Boeing V DTSC (Director Debbie Raphael and predecessors).

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Commenter No. 165 (cont'd): Christine Rowe

I have now reread the complete decision of the Federal Court of Appeals regarding SB 990.

It is my opinion that based on this ruling that California, despite its agreement status with the NRC, does not have the ability to direct the Department of Energy on the cleanup of radioactive materials because the cleanup of radioactive materials falls under federal authority and is controlled by Congress.

Furthermore, it is my opinion, that DTSC has no authority for remediation of radionuclides, and any authority under the Atomic Energy Act would fall to the California Department of Public Health (CDPH).

It is also my opinion that DTSC cannot apply a cleanup standard for radionuclides at a federal site that would be greater than would be applied to a private company. And Boeing, in this case, had its commercial licensing for radioactive materials with CDPH.

It is my opinion that DOE entered the AOC's at a time that SB 990 was the applicable law of the State. However, SB 990 was upheld as unconstitutional under the Federal Supremacy Clause among other orders.

It is my opinion that DTSC should be working in strict cooperation not only with DOE on the radiological cleanup, but also with CDPH for decisions related to the risks of radionuclides to the community from this site. DTSC should request from the Governor that CDPH play an active role in this site.

While CERCLA can apply to some federal sites, again, the laws would not apply in my opinion to clean up any radioactive site beyond that which the Federal EPA would require.

I am sure that you are aware that when the EPA determined that this site would qualify as a Federal Superfund Site, the EPA also determined that SB 990 would not be an ARAR (Applicable Relevant or Appropriate Requirement). It is my opinion that the EPA would have required that the site be cleaned up based upon risk and end use. Therefore, their cleanup standard would have been based upon The Boeing Company's stated end use which is open space / parkland which I believe is referenced in the SB 990 litigation.

165-1

165-1

As noted in Chapter 1, Section 1.1, of this Final EIS, DOE would comply with applicable requirements for cleanup of radiological and hazardous substance, including regulations, orders, and agreements. Chapter 8 of this Final EIS presents the environmental, safety, and health laws, regulations, orders, and permits that apply or may potentially apply to the proposed alternatives evaluated in the EIS. Federal, State of California, and DOE environmental, safety, and health requirements, as well as applicable local Ventura County and Los Angeles County, California, requirements are summarized in Section 8.1 of this Final EIS.

165-2

165-2

Thank you for your comment. It has been included in the Administrative Record for the EIS.

165-3

165-3

Thank you for your comment. DTSC's policies and actions are not under DOE's control. Because the comment is not on the scope or content of this EIS, no additional response is provided. It has been included in the Administrative Record for the EIS.

165-4

165-4

This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. But, it also analyzed alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. In this Final EIS, DOE added a scenario under the Conservation of Natural Resources Alternative that reflect future use of the land as open space (see Chapter 2, Section 2.4).

Commenter No. 165 (cont'd): Christine Rowe

Very specific references are made to the DOE in this ruling by the 9th Circuit Court of Appeals.

|| 165-4
cont'd

In conclusion, it is my opinion based upon the original ruling by Judge Conti that the DOE must do a complete Environmental Impact Statement, and the DOE was obligated to consider multiple alternatives.

|| 165-5

165-5 Thank you for your comment.

It is my opinion that NEPA requires the DOE to consider reasonable alternatives before choosing an action.

Furthermore, it is my opinion that the DOE cannot consider an alternative that could permanently and irrevocably harm The Boeing Company's property without a formal letter stating this position.

|| 165-6

165-6 DOE acknowledges your comment. DOE would work with Boeing to minimize damage to the Boeing property.

It is my opinion that the soil volume that is considered under the AOC Alternative would irrevocably damage The Boeing Company's property. And the ruling also states that SB 990 is unconstitutional because Boeing cannot sell or transfer its property until the groundwater is cleaned up - a time period referenced in the ruling as 50,000 years!

It is my understanding that the litigation PSR - LA et al v DTSC and CDPH et al including The Boeing Company as the real party of interest has delayed the demolition of the remaining Boeing facilities in AREA IV. This has, in my opinion, prevented final sampling under those remaining Boeing facilities, and may have delayed the DTSC Programmatic Draft Environmental Impact Report?

|| 165-7

165-7 As stated in Chapter 1, Section 1.3, of this Final EIS, DOE has suspended demolition and removal activities of its remaining facilities at SSFL until it completes this Final EIS and associated ROD(s). DOE does not believe that the presence of the 4 Boeing buildings in Area IV substantially affects the analysis performed or the conclusions in this Final EIS. Comments on the DTSC environmental impact report are outside the scope of this DOE EIS.

As a result of what I have read to date, I will recommend, as I have in the past, that the DOE remove its remaining radiological facilities as soon as they can obtain the funds from Congress. And I also recommend that DOE first and foremost remove the radiological contamination to local Background or Look Up Table values.

|| 165-8

165-8 DOE acknowledges your support for removal of the remaining radiological facilities at Area IV as well as your support for removal of radiological contamination to local background or LUT values. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

However, I would have to point out that this recommendation is not based upon my perceived risk, but rather based upon fears and misinformation communicated to the community from various antinuclear groups.

Commenter No. 165 (cont'd): Christine Rowe

There is a qualifier to my reference to local Background levels. As you know, the Federal EPA did Background testing in the same geological formations as the SSFL site. It is my opinion that local Background would have been the highest value plotted at the Background site - not the USL 95 for each radiological contaminant of concern. Those would have been real numbers found in Background, not necessarily anomalies that should have been thrown out as outliers.

Furthermore, I would want verification of whether any radionuclides were detected on the SSFL site greater than in previous years that would indicate if even trace amounts of Cesium 137 and Strontium 90 had made their way to the SSFL site from Fukushima.

If so, we may need to add those values to the original Background numbers to set the radiological Look Up Table values for those radionuclides. Since the AOCs require anything above the Look Up Table to be cleaned up, these very small values could be significant enough to cause a larger radiological cleanup.

My recommendations for a chemical cleanup would be based upon risk to both human and other biological receptors. I have to read more in the DOE DEIS to determine if I want to choose one of the two lesser cleanup alternatives - their costs, their remediation time, and their number of trucks do not very greatly.

One final thought - all of your scenarios I believe are based upon about a 100 trucks a day moving in each direction. Since my community of West Hills will be greatly impacted by this cleanup and much of the truck traffic as well as the airborne contamination from the soil disturbance, I would prefer:

- 1) Limit the trucks to 50 per day - no more than six per hour in each direction; no trucks should run during school drop off and pick up times or when it is dark.
- 2) Limit the cleanup time to a longer time to be more protective of the community based upon the Woolsey Canyon routes, the airborne contamination, the Governor's Water Restrictions based upon the drought, and other community risk related criteria, and all Federal, State, and Local applicable laws.

Respectfully submitted,

Christine L. Rowe

39 year resident of West Hills within about 5 miles of the SSFL site periphery

165-9

165-10

165-9 DOE recognizes that the removal of the upper level results from the background data set prior to statistically determining a background value affected the LUT comparison value. The same higher background concentrations are likely present in Area IV. This makes differentiating background concentrations from contamination difficult. Regarding the Fukushima accident fallout, EPA had completed the majority of its sampling prior to the time of the accident. Prior to EPA's study DOE had performed numerous soil removal actions for radionuclides. EPA's results are consistent with prior knowledge of where radionuclides should be found. The final LUT values for radionuclides have not been established. DOE will re-evaluate the degree of required cleanup for radionuclides at that time.

165-10 Thank you for your comments regarding suggested impact limitations. They have been included in the Administrative Record for this final EIS.

As discussed in Chapter 2, for the Final EIS DOE revised the EIS analysis to reflect a more realistic average of 16 heavy-duty truck round trips per day for soil removal activities, although on some days the number of daily truck shipments could increase to 32. This revision extended the projected time for completion of the soil remediation alternative involving the greatest number of heavy-duty truck shipments, the Cleanup to AOC LUT Values Alternative, from the 10 years evaluated in the draft EIS to the 26 years evaluated in the Final EIS. DOE evaluated transport of waste from SSFL down Woolsey Canyon Road, then via multiple local roadways to local freeways. Shipments would occur during daylight hours.

Considering all remediation activities at Area IV and the NBZ (i.e., soil remediation, building removal, and groundwater remediation), daily shipments attributable to DOE remediation activities would not exceed 32 and generally would be considerably less. However, NASA and Boeing could also be making shipments of waste, backfill, and equipment during some of the same years that DOE would be making shipments of waste, backfill, and equipment. As discussed in Chapter 2, Section 2.4.4, of this Final EIS, DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of trucks allowed on Woolsey Canyon Road to no more than 96. The potential cumulative impacts of site remediation by DOE, NASA, and Boeing are evaluated in Chapter 5 of the EIS, including the risks associated with transport of waste and material and the potential impacts on traffic in the SSFL area. DOE expects that daily heavy-duty truck shipments potentially as high as 96 per day from DOE, NASA, and Boeing would only occur for a few years. Note that if the total number of cumulative shipments was reduced from

Commenter No. 165 (cont'd): Christine Rowe

an average of 96 per day to 50 per day, it would reduce annual environmental impacts such as annual risks from material transport or annual water use but would not reduce the overall impacts attributable to the projected cumulative operations but would spread them over a longer period of time. Water use by DOE for site remediation activities is estimated for each action alternative and combination of alternatives in Chapter 4, Section 4.1, and by DOE, NASA, and Boeing in Chapter 5, Section 5.5.1.

Commenter No. 165 (cont'd): Christine Rowe

FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

THE BOEING COMPANY,
Plaintiff-Appellee,

v.

MAZIAR MOVASSAGHI, in his official
capacity as the Acting Director of
the California Dept. Of Toxic
Substances Control; LEONARD
ROBINSON, in his official capacity as
the Acting Director of the California
Dept. Of Toxic Substances Control,
Defendants,

and

DEBBIE RAPHAEL, in her official
capacity as the Acting Director of
the California Dept. Of Toxic
Substances Control,
Defendant-Appellant.

No. 11-55903

D.C. No.
2:10-cv-04839-
JFW-MAN

OPINION

Appeal from the United States District Court
for the Central District of California
John F. Walter, District Judge, Presiding

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Commenter No. 165 (cont'd): Christine Rowe

2 THE BOEING COMPANY V. RAPHAEL

Submitted May 31, 2013*
Pasadena, California

Filed September 19, 2014

Before: Alfred T. Goodwin, Andrew J. Kleinfeld,
and Barry G. Silverman, Circuit Judges.

Opinion by Judge Kleinfeld

SUMMARY**

Environmental Law

The panel affirmed the district court's decision that a California law governing cleanup of a federal nuclear site violated the doctrine of intergovernmental immunity.

The Boeing Co. challenged the validity of California's Senate Bill 990, which prescribes cleanup standards for radioactive contamination at Santa Susana Field Laboratory. SB 990 requires that the site be made suitable for subsistence farming, a more demanding standard than that imposed by a plan adopted by the federal Department of Energy.

* The panel unanimously concludes this case is suitable for decision without oral argument. See Fed. R. App. P. 34(a)(2).

** This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

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Commenter No. 165 (cont'd): Christine Rowe

THE BOEING COMPANY V. RAPHAEL 3

The panel held that Boeing had standing because as landowner, it established injury in fact.

The panel held that SB 990 violated the doctrine of intergovernmental immunity because it regulated DOE's cleanup activities directly in violation of the Supremacy Clause. In addition, SB 990 discriminated against the federal government and Boeing as a federal contractor hired to perform the cleanup of the Santa Susana site.

The panel did not reach the question of whether the federal laws governing nuclear materials and cleanup of hazardous substances preempted the state law. It also did not reach Boeing's claim under 42 U.S.C. § 1983 for a declaratory judgment and an injunction.

COUNSEL

Brian W. Hembacher, Supervising Deputy Attorney General, Los Angeles, California, for Defendant-Appellant.

Randolph D. Moss, Wilmer Cutler Pickering Hale and Dorr LLP, Washington, D.C., for Plaintiff-Appellee.

Daniel P. Selmi, Los Angeles, California, for Amici Curiae Southern California Federation of Scientists, Los Angeles Chapter of Physicians for Social Responsibility, Rocketdyne Cleanup Coalition, and Committee to Bridge the Gap.

David C. Shilton, United States Department of Justice, Washington, D.C., for Amicus Curiae United States.

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Commenter No. 165 (cont'd): Christine Rowe

4 THE BOEING COMPANY V. RAPHAEL

OPINION

KLEINFELD, Senior Circuit Judge:

We affirm the district court’s decision that a California law governing cleanup of a federal nuclear site violates the doctrine of intergovernmental immunity. Because we decide that the state law impermissibly regulates and discriminates against the federal government and its contractor, we do not reach the question of whether the federal laws governing nuclear materials and cleanup of hazardous substances preempted the state law. We need not reach Boeing’s Section 1983 claim for a declaratory judgment and an injunction.

FACTS

The federal government made and tested rockets, nuclear reactors, and various nuclear applications for war and peace at the Santa Susana Field Laboratory beginning shortly after World War II. When built in the 1940s, this lab was far from people, thirty miles from Los Angeles in Ventura County. Los Angeles grew, though, and now over 150,000 people live within five miles of the site and half a million people live within ten miles.

When the state law challenged in this case was promulgated, 452 acres of the 2,850 acre lab site were federally owned and managed by the National Aeronautics and Space Association (“NASA”). Most of the site, the remainder, was owned by Boeing, a defense contractor, which acquired the land from another defense contractor, Rockwell International Corporation, in 1996. Rockwell International and its predecessor, North American Aviation, had occupied or owned the land since 1947. (For

Response side of this page intentionally left blank.

Commenter No. 165 (cont'd): Christine Rowe

THE BOEING COMPANY V. RAPHAEL 5

convenience, we refer to Boeing and its predecessors, Rockwell International and North American Aviation, as "Boeing.") Since the 1950s, the federal Department of Energy ("DOE") and its predecessor agencies have leased 90 acres of the site from Boeing, where it built and operated 16 nuclear reactors of various sorts and over 200 facilities for nuclear research.

These two federal agencies, DOE and NASA, hired Boeing to assist in the nuclear research and rocket testing. Most of Boeing's work was as a contractor on behalf of the federal government, though it also did some commercial work on its own account at the site. Boeing operated one commercial nuclear reactor under a license from the Atomic Energy Commission. It also handled what the California statute calls "radiological contaminants" under licenses from the State of California to perform activities involving the use of x-ray machines, calibration devices, gas chromatographs, smoke detectors, and various gauges.

All this work created a terrible environmental mess. It also created tremendous benefits, for war and peace, but the government's work unarguably imposed tremendous harm to the environment. The soil, ground water, and bedrock were seriously contaminated. Disasters and foolishness added to the environmental harm.

In 1959, one of the reactors experienced a partial meltdown that released radioactive gases into the atmosphere for three weeks. This partial meltdown accounts for about 90% of the radioactive contamination. Much of the rest came from other nuclear reactor accidents, an open burn pit for sodium-coated materials, and numerous fires and accidents at the "Hot Lab." The "Hot Lab" was used for cutting up spent

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Commenter No. 165 (cont'd): Christine Rowe

6 THE BOEING COMPANY V. RAPHAEL

nuclear fuel from the site's reactors and spent fuel shipped to the lab from elsewhere in the United States. Radioactive material was also dumped at various locations around the site. One disposal procedure consisted of shooting barrels of toxic substances with shotguns to make them explode and burn.

The federal government, not Boeing, appears from the record to be responsible for the radioactive pollution. Though Boeing conducted some commercial nuclear work at the site, no radioactive contamination has been traced to Boeing's private activity. It is undisputed in this case that the site's radioactive contamination either resulted from federal activity or is indistinguishable from federal contamination.

That is not to suggest that the pollution was merely wanton. The United States Air Force and NASA used the site to test rocket engines for ballistic missiles and space exploration. In the 1940s, the Air Force hired Boeing to help develop the Navaho guided missile system. The Air Force and NASA also used Boeing to test liquid-propellant rocket engines, many of which were used in the space program. But over 500,000 gallons of the solvent used to clean rocket engines and launch sites, trichloroethylene, contaminated the soil, along with heavy metals and other toxins. A trichloroethylene containment system was implemented in 1961, after which Boeing did its private commercial testing, but the damage was already done. California concedes that it cannot identify any chemical contamination that resulted from non-federal activity and that, to the extent that there is any contamination from Boeing's private activity, it cannot be distinguished from federal contamination.

All this nuclear and rocket research is over now. DOE ended its nuclear research at Santa Susana in the 1980s. In

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Commenter No. 165 (cont'd): Christine Rowe

THE BOEING COMPANY V. RAPHAEL 7

1996, DOE decided to close its research center and removed many of the facilities. The Air Force's and NASA's rocket research ended in 2006. Operations at the site now are limited to trying to clean it up. Different aspects of the cleanup are carried out under different federal and state authorities. The federal government supervised the cleanup of radioactive contamination, and the California Department of Toxic Substances Control supervised the cleanup of chemical contamination under generally applicable state law.

The subject of this litigation is a state's authority, as opposed to the federal government's authority, to regulate the cleanup of radioactive pollution. The issue is whether the state may mandate more stringent cleanup procedures, not generally applicable within the state, to a particular site where the federal government undertook to clean up nuclear contamination it created. In the circumstances of this case, the answer is no.

So far, the federal Department of Energy, as successor to the Atomic Energy Commission, has supervised and implemented the cleanup of radioactive material. Under the Atomic Energy Act, DOE is responsible for establishing a comprehensive health, safety, and environmental program for managing DOE's nuclear facilities nationwide.¹ DOE has implemented that authority by issuing orders that set health and safety limits for radioactive releases and cleanup and site-closure procedures.²

¹ 42 U.S.C. §§ 2121(a)(3), 2201.

² See DOE Orders 435.1, 458.1, 5400.1, 5400.5, available at <https://www.directives.doe.gov/directives>. DOE Order 435.1, *Radioactive Waste Management*, and its accompanying manuals set forth requirements

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To clean up the radioactive contamination, DOE hired Boeing. Boeing conducted a study of the contamination at Santa Susana. The soil, bedrock, and groundwater contamination has been extensively sampled and analyzed. Different parts of the site have different sorts of pollutants, since rocket testing was done in some areas, and nuclear research in others. In 2003, DOE adopted an environmental assessment for cleaning up radioactive waste in the area where nuclear research was performed. This federal plan proposed to clean it up to standards suitable for industrial, recreational, and even suburban residential use. As a cleanup contractor, Boeing is actively cleaning up the Santa Susana site on behalf of DOE. Boeing pays a portion of the cleanup costs and will bear the portion of costs not paid by or recovered from the federal government. The federal government sets the standard for the entire cleanup of radioactive materials (the only waste at issue in this case) and directs Boeing's conduct.

Not everyone was satisfied with the DOE plan. The federal Environmental Protection Agency ("EPA"), the State of California, and various advocacy groups have challenged both the plan and DOE's decision to prepare an environmental assessment as opposed to an environmental impact statement. The question whether an environmental impact statement should be prepared is not before us in this litigation. A federal district court injunction in another case prohibits DOE from transferring ownership, possession, or

for managing radioactive waste including characterization, treatment, disposal, and monitoring. DOE Order 5400.5, *Radiation Protection of the Public and the Environment*, addresses cleanup standards that DOE contractors are required to implement during decontamination and decommissioning activities.

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control over anything in the primary area of radioactive contamination until it prepares an environmental impact statement.³

Non-radioactive chemical pollutants are regulated differently from radioactive pollutants.⁴ The California Department of Toxic Substances Control regulates the cleanup of chemical contamination, pursuant to an agreement with EPA authorizing state control, under a different federal statute from the one applicable to radioactive materials.⁵ The various state and federal agencies involved, and Boeing, agreed upon an order from California's Department of Toxic Substances Control to clean up the chemical contamination to a level adequate for suburban residential use. That order does not address the cleanup of radioactive materials.

This case arises from the State of California's decision to extend its control to cleanup of radioactive pollutants. In October 2007, California passed Senate Bill 990, "Cleanup of Santa Susana Field Laboratory," prescribing cleanup standards for both radioactive and chemical contamination.⁶ The statutory standard requires that the site be made suitable for "suburban residential or rural residential (agricultural)

³ *Natural Res. Def. Council, Inc. v. Dep't of Energy*, No. C-04-04448 SC, 2007 WL 1302498, at *22 (N.D. Cal. May 2, 2007).

⁴ *United States v. Manning*, 527 F.3d 828, 833 (9th Cir. 2008).

⁵ California operates a federally approved hazardous waste management plan pursuant to the Resource Conservation and Recovery Act, 42 U.S.C. § 6926. This plan covers only chemical contamination, not radioactive materials. 42 U.S.C. §§ 6903(5), (27), 6905(a).

⁶ S.B. 990, 2007 Reg. Sess., ch. 729 (Cal. 2007).

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[use], whichever produces the lower permissible residual concentration” for each contaminant found at the site.⁷ The state statute does not further define the “rural residential (agricultural)” standard, but the federal EPA “agricultural” standard apparently intended by the state statute assumes “consumption of farm products for a subsistence farmer,” getting all his or her vegetables, fruit, meat, fish, and milk from the land, along with incidental consumption of soil and inhalation of dust.⁸ In effect, Senate Bill 990 (“SB 900”) would require that hypothetical subsistence farmers could live safely on their farms eating nothing but their chickens, eggs, crops, and cheese and drinking their milk from their cows eating the grass, in this patch of nuclear and chemical toxic waste in the Los Angeles suburbs.

Boeing and the federal agencies contend that this standard is more demanding than the usual practice under state and federal law of setting a cleanup level commensurate with a site’s reasonably foreseeable use.⁹ It may well be

⁷ Cal. Health & Safety Code § 25359.20(c).

⁸ EPA, *Preliminary Remediation Goals for Radionuclides: Agricultural Biota, Soil and Water Graphic and Supporting Text*, available at <http://epa-prgs.ornl.gov/radionuclides/agsoilimage.html>.

⁹ See Cal. Health & Safety Code § 25356.1.5(d) (“The exposure assessment of any risk assessment . . . shall include the development of reasonable maximum estimates of exposure for both current land use conditions and reasonably foreseeable future land use conditions at the site.”); EPA, OSWER Directive No. 9355.7-19, *Considering Reasonably Anticipated Future Land Use and Reducing Barriers to Reuse at EPA lead Superfund Remedial Sites* (2010); EPA, OSWER Directive No. 9355.7-04, *Land Use in the CERCLA Remedy Selection Process* (1995); EPA, Publ’n No. 9285.7-01B, *Risk Assessment Guidance for Superfund (RAGS) Part B*, ch. 2.3 (1991).

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unreasonable to foresee subsistence farming at the site. The record does not show why this standard was adopted, or whether subsistence farming of this sort was contemplated for the Los Angeles suburbs. The subsistence farming standard is more stringent than the suburban residential standard required by the agreed-upon order governing the cleanup of non-radioactive chemicals. DOE's cleanup procedures specifically rejected the state law's standard as "not a reasonable scenario for the site." Boeing has made a public commitment to dedicate the site for public use as open space parkland, not subsistence farming. But reasonable foreseeability of subsistence farming is not the controlling issue in this case. The relevant tension in this case is the state's authority to impose its subsistence farming standard as against the less stringent federal industrial, recreational, and residential standard.

Until SB 990's cleanup standard is met, the state law makes it a crime for "[any] person or entity [to] sell, lease, sublease, or otherwise transfer" the land.¹⁰ The "Statement of Uncontroverted Facts," not disputed by the California Department of Toxic Substances Control, says that remediating the groundwater to the California standard "could take as long as 50,000 years."

Boeing filed this lawsuit in federal district court challenging the validity of the California statute, SB 990, controlling cleanup of the Santa Susana Laboratory grounds. Boeing argued, and the district court agreed, that the federal government had preempted the field of regulation of nuclear safety, and alternatively that cleanup of radioactive materials at the Santa Susanna site is a federal activity, so state

¹⁰ Cal. Health & Safety Code §§ 25359.20(d); 25190.

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regulation of how the federal government cleans it up violates the Supremacy Clause and the doctrine of intergovernmental immunity.

The California Department of Toxic Substances Control (“California”) appeals. We vacated oral argument to give the government an opportunity to file an amicus brief, which it did. The federal government agrees with the district court that the state law, SB 990, is unconstitutional under the Supremacy Clause and alternatively, because Congress has preempted the field.

ANALYSIS

The case was decided on summary judgment, so we review de novo.¹¹

I. Standing

California does not challenge Boeing’s standing, but some advocacy groups as amici curiae do. Their argument is that Boeing suffers no injury in fact from SB 990 because as a federal contractor, it will be paid for its work and bears no other costs. We disagree. The law prohibits Boeing from transferring its own real property, injury enough.¹² Even if the federal government does pay for all the cleanup work, the estimated 50,000 year delay in transferability (based on estimated time for cleanup of groundwater to be completed)

¹¹ *United States v. Manning*, 527 F.3d 828, 836 (9th Cir. 2008).

¹² *Andrus v. Allard*, 444 U.S. 51, 64 n.21 (1979) (“Because the regulation they challenge restricts their ability to dispose of their property, appellees have a personal, concrete, live interest in the controversy.”).

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is indeed an injury in fact to Boeing as landowner. Nor has the federal government agreed to cleanup the entire site at its own expense to SB 990's standards. California concedes that Boeing will pay the portion of the cleanup expenses not borne by the federal government. Injury in fact is clear.

II. Intergovernmental Immunity

Under the Supremacy Clause, "the activities of the Federal Government are free from regulation by any state."¹³ Accordingly, state laws are invalid if they "regulate[] the United States directly or discriminate[] against the Federal Government or those with whom it deals."¹⁴ SB 990 is invalid on both grounds.

A. Direct Regulation of the U.S. Government

SB 990 regulates the Department of Energy's cleanup activities directly. SB 990 authorizes California's Department of Toxic Substances Control to "use any legal remedies available" under the State's hazardous waste laws "to compel a responsible party or parties to take or pay for appropriate removal or remedial action necessary to protect the public health and safety and the environment at the Santa Susana Field Laboratory site."¹⁵ DOE is a "responsible party" with respect to radioactive contamination. All of the contamination at Santa Susana is the result of federal activity

¹³ *Mayo v. United States*, 319 U.S. 441, 445 (1943).

¹⁴ *North Dakota v. United States*, 495 U.S. 423, 435 (1990); *United States v. City of Arcata*, 629 F.3d 986, 991 (9th Cir. 2010).

¹⁵ Cal. Health & Safety Code § 25359.20(a).

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or is indistinguishable from contamination caused by federal activity. In addition, SB 990's legislative findings state that the Act is necessary in large part because of federal activity at the site and because "DOE declined to follow the 1995 Joint Policy [between EPA and DOE] and chose to instead rely on less protective cleanup standards."¹⁶

The federal Department of Energy has accepted responsibility for the cleanup of radioactive contamination, and it is actively conducting the cleanup through its cleanup contractor, Boeing. SB 990 affects nearly all of DOE's decisions with respect to the cleanup, including the environmental sampling that is required, the cleanup procedures to be used, and the money and time that will be spent. The state law requires an application of more stringent cleanup standards than federal laws and DOE's cleanup procedures do. Whether state law is better or worse does not affect state authority, just whether the state regulates federal activity.

The federal government's decision to hire Boeing to perform its cleanup work does not affect the legal analysis. In *Goodyear Atomic Corp. v. Miller*, the Supreme Court held that "a federally owned facility performing a federal function is shielded from direct state regulation, even though the federal function is carried out by a private contractor, unless Congress clearly authorizes such regulation."¹⁷ In *Gartrell Construction Inc. v. Aubry*, we held that California's licensing requirements for construction contractors were preempted to the extent that they applied to federal

¹⁶ SB 990 § 2(h).

¹⁷ 486 U.S. 174, 181 (1988).

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contractors.¹⁸ California argues that Boeing must “stand in the government’s shoes” in order to assert immunity from state regulation. The cases that California cites to are inapposite as they discuss generally applicable state tax laws, which resulted in merely an increased economic burden on federal contractors as well as others. These tax laws did not regulate what the federal contractors had to do or how they did it pursuant to their contracts.

SB 990 directly interferes with the functions of the federal government. It mandates the ways in which Boeing renders services that the federal government hired Boeing to perform. The state law replaces the federal cleanup standards that Boeing has to meet to discharge its contractual obligations to DOE with the standards chosen by the state. It overrides federal decisions as to necessary decontamination measures. Unlike the tax cases, SB 990 regulates not only the federal contractor but the effective terms of federal contract itself.

Thus, SB 990 violates intergovernmental immunity unless Congress has clearly and unambiguously authorized California to exercise authority over the Department of Energy with respect to radioactive materials. “It is well settled that the activities of federal installations are shielded by the Supremacy Clause from direct state regulation unless Congress provides ‘clear and unambiguous’ authorization for such regulation.”¹⁹

¹⁸ 940 F.2d 437, 441 (9th Cir. 1991).

¹⁹ *Goodyear Atomic Corp.*, 486 U.S. at 180 (quoting *EPA v. State Water Res. Control Bd.*, 426 U.S. 200, 211 (1976)).

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There is no clear congressional authorization in the Atomic Energy Act that would allow California to regulate DOE's cleanup of radioactive materials at Santa Susana. The agreement entered between California and the Atomic Energy Commission in 1962 does not affect the immunity analysis. The 1962 agreement was made pursuant to the 1959 amendment to the Atomic Energy Act that allowed the Atomic Energy Commission to transfer licensing authority over nuclear materials to states, pursuant to individual agreements with individual states.²⁰ Congress sought, among other things, "to recognize the need, and establish programs for, cooperation between the States and the Commission with respect to control of radiation hazards associated with the use of [nuclear material]."²¹ The Act provides that states "shall have authority to regulate the materials covered by [an] agreement for the protection of the public health and safety from radiation hazards."²² Under the 1962 agreement, California's Department of Public Health has licensed Boeing's *commercial* nuclear work at Santa Susana.

The 1962 agreement does not grant California any authority to regulate the federal government. The Atomic Energy Commission's regulations implementing the 1959 amendment explicitly state that exemptions from federal licensing authority under the agreement between states and the Commission "do not apply to agencies of the Federal

²⁰ 42 U.S.C. § 2021.

²¹ 42 U.S.C. § 2021(a)(2).

²² 42 U.S.C. § 2021(b).

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government.”²³ So even within “Agreement States,” such as California, the federal agencies remain subject to the federal government’s exclusive regulatory authority. The 1962 agreement references these regulations, and no language under the agreement indicates that the AEC was ceding authority to regulate federal activities to state agencies. Subsequent administrative developments make this clear.²⁴

Our conclusion is consistent with the history of the Atomic Energy Act and Congress’s response to other attempts by states to regulate federal activities. Section 2018 of the Atomic Energy Act provides that nothing in the Act affects state regulatory authority over the “generation, sale, or transmission of electric power produced through the use of nuclear facilities licensed by the Commission.”²⁵ In 1965, Congress added the following to Section 2018: “*Provided*, That this section shall not be deemed to confer upon any

²³ 27 Fed. Reg. 1350, 1352 (1962) (codified at 10 C.F.R. § 150.10).

²⁴ The Atomic Energy Commission was abolished in 1974, and its duties divided between the Nuclear Regulatory Commission (“NRC”) and the Energy Research Development Administration, subsequently turned into the cabinet-level Department of Energy. The Nuclear Regulatory Commission, now with the authority to enter into agreements with states, makes it clear that the agreement with states “does not transfer regulatory authority to the States over . . . [a]ctivities of Federal Agencies located in Agreement States.” NRC Procedure SA-500, *Jurisdiction Determinations* 2 (Sept. 25, 2007). NRC also requires the Agreement States to provide exemptions for NRC’s and DOE’s prime contractors performing work on government-owned or controlled sites from licensing requirements. Statement of Policy, 46 Fed. Reg. 7543 (Jan. 23, 1981). *Cf.* 10 C.F.R. §§ 30.12, 40.11, 70.11 (exempting NRC’s and DOE’s prime contractors from licensing requirements under the Atomic Energy Act).

²⁵ 42 U.S.C. § 2018.

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Federal, State, or local agency any authority to regulate, control, or restrict any activities of the Commission.”²⁶ Congress added this proviso to overrule a Ninth Circuit opinion, *Maun v. United States*, 347 F.2d 970 (9th Cir. 1965), which interpreted the section to allow a municipality to prohibit transmission lines that the Atomic Energy Commission sought to build in order to carry out its own activities.²⁷

The Resource Conservation and Recovery Act (“RCRA”)²⁸ does not authorize California to regulate DOE’s cleanup of radioactive contamination. RCRA allows states to operate a hazardous waste management plan applicable to federal facilities so long as the state regulates “in the same manner, and to the same extent, as any person is subject to such requirements.”²⁹ But RCRA excludes from its coverage radioactive materials regulated under the Atomic Energy Act.³⁰ So RCRA does not apply to the radioactive contamination in this case.

Nor does the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)³¹ save SB

²⁶ Pub. L. No. 89-135, 79 Stat. 551.

²⁷ *Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n*, 461 U.S. 190, 210–11 (1983).

²⁸ 42 U.S.C. § 6901, *et seq.*

²⁹ 42 U.S.C. §§ 6926, 6961(a).

³⁰ 42 U.S.C. §§ 6903(5), (27), 6905(a).

³¹ 42 U.S.C. § 9601, *et seq.*

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990. Under CERCLA, states may obtain authority to clean up certain hazardous waste sites by obtaining EPA approval and entering into a “cooperative agreement.”³² Unlike RCRA, some provisions of CERCLA cover nuclear materials. The definition of “release” includes releases of nuclear materials except in certain situations.³³ EPA includes “radionuclides” in the list of “hazardous substances.”³⁴ And CERCLA contains a federal immunity waiver clause with respect to state laws concerning removal and remedial of hazardous substances. However, the waiver does not apply “to the extent a State law would apply any standard or requirement to [federal] facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by [the federal government].”³⁵ SB 990 applies more stringent requirements to Santa Susana than to non-federal facilities because it requires cleanup to a standard suitable for subsistence farming, rather than for the site’s reasonably foreseeable future use. Under the state’s generally applicable process, the future use would be determined by considering a number of site-specific factors such as current use, county general plans, and topography. It is undisputed that the subsistence farming has not been so determined as a land use assumption for the Santa Susana site.

³² 42 U.S.C. § 9604(d)(1)(A).

³³ 42 U.S.C. § 9601(22)(C).

³⁴ 40 C.F.R. Part 302, Table 302.4. Under CERCLA, EPA has the authority to designate additional hazardous substances by regulations. 42 U.S.C. § 9602.

³⁵ 42 U.S.C. § 9620(a)(4).

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Therefore, we conclude that SB 990 regulates the federal government directly in violation of the Supremacy Clause.

B. Discrimination Against the U.S. Government and Its Contractors

SB 990 also violates intergovernmental immunity because it discriminates against the federal government and Boeing as a federal contractor. "A state or local law discriminates against the federal government if it treats someone else better than it treats the government."³⁶ California does not dispute that "SB 990 singles out Boeing, DOE, NASA and the [Santa Susana Field Laboratory] site for a substantially more stringent cleanup scheme than that which applies elsewhere in the State." The fact that Santa Susana is especially contaminated does not render the law non-discriminatory because California's generally-applicable environmental laws do not impose the SB 990 radioactive cleanup standards at the Santa Susana site.

The federal government's decision to hire Boeing to perform the cleanup rather than using federal employees does not affect our immunity analysis on this ground. When the state law is discriminatory, a private entity with which the federal government deals can assert immunity.³⁷ In *Davis v. Michigan Department of Treasury*, a retired federal employee challenged Michigan's taxation of his federal retirement

³⁶ *United States v. City of Arcata*, 629 F.3d 986, 991 (9th Cir. 2010) (internal quotation marks omitted).

³⁷ *North Dakota v. United States*, 495 U.S. 423, 435 (1990).

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benefits.³⁸ Michigan argued that only the federal government, not private entities or individuals, are immune from state laws.³⁹ The Supreme Court disagreed because the state law at issue discriminated against federal employees by exempting from state taxation retirement benefits paid to state employees, but not those paid to federal employees.⁴⁰ The Supreme Court held that

It is true that intergovernmental tax immunity is based on the need to protect each sovereign's governmental operations from undue interference by the other. But it does not follow that private entities or individuals who are subjected to discriminatory taxation on account of their dealings with a sovereign cannot themselves receive the protection of the constitutional doctrine. Indeed, all precedent is to the contrary.⁴¹

Likewise, Boeing cannot be subjected to discriminatory regulations because it contracted with the federal government for the nuclear research and now the cleanup of radioactive contamination.

SB 990 specifically targets Santa Susana because of the radioactive pollution created by federal activity on the site

³⁸ 489 U.S. 803, 814 (1989).

³⁹ *Id.*

⁴⁰ *Id.* at 814–15.

⁴¹ *Id.* at 814 (citations omitted).

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and because “DOE declined to follow the 1995 Joint Policy [between EPA and DOE] and chose to instead rely on less protective cleanup standards.”⁴² SB 990 applies more stringent cleanup standards than generally applicable state environmental laws. By doing so, SB 990 discriminates against the federal government and against Boeing as a federal contractor. Therefore, it is invalid under the doctrine of intergovernmental immunity.

The 2010 Administrative Orders on Consent from the California Department of Toxic Substances Control that DOE and NASA agreed to do not affect the analysis of SB 990. Both Orders set a radioactive cleanup standard for the soil in certain areas of Santa Susana. They do not set cleanup standards for bedrock or groundwater, and SB 990 does. Any waiver clauses included in the Orders have no effect beyond the term of the Orders.

III. Severability

We agree with the district court that the terms of SB 990 are unseverable. California concedes that applying SB 990 only to chemical cleanup is impossible without gutting the Act because the Act sets cleanup standards in part by requiring that “the cumulative risk from radiological and chemical contaminants at the site shall be summed.”⁴³ We decline to construe SB 990 as limited to non-radioactive cleanup because it would “require us to examine and rewrite most of the statute in a vacuum as to how the various

⁴² SB 990 § 2(h).

⁴³ Cal. Health & Safety Code § 25359.20(c).

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provisions were intended to intersect and in a way that would be at odds with the purpose of the statute.”⁴⁴

The judgment of the district court is **AFFIRMED**.

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⁴⁴ *United States v. Manning*, 527 F.3d 828, 840 (9th Cir. 2008).

Commenter No. 166: Christine Rowe

From: Christine Rowe
To: Jennings, Stephanie
Date: Thursday, April 13, 2017 11:17:24 PM
Subject: Department of Energy Draft Environmental Impact Statement Comment
Attachments: Radon in Ventura County and Los Angeles County around the SSFL site.jpg
 DOE to LARWQCB MCLS for Radium and Uranium.jpg
 Radon Map showing High Radon Potential in West Hills.jpg

Dear Ms. Jennings,

In my recent review of technical documents, I had seen a reference to a previous cleanup standard for AREA IV of the SSFL at what I believe was 9.8 pi /gm. I recall that number because I contacted a health physicist to try to determine what that level means in terms of health risk.

The DOE should have a health physicist on staff available to the community to respond to questions like this one.

In the process of an online search for that document, I happened upon this document from the DOE to the WaterBoard.

http://www.etc.energy.gov/Library/Cleanup_and_Characterization/Groundwater/1%20SSFL%20FSD%20GWIM%20Implementation%20Plan_Sept_2015%20DRAFT.pdf

This document is important in that it references the MCLS for radionuclides which include radium and uranium. Why is that important? Please see the screen shot attached.

It is my opinion that most people in our community do not understand that we have low levels of uranium and its daughters in our local environment. Radon is a daughter in the uranium decay chain. I have spent a great deal of time on this recently because I found a new interactive map for California related to radon risk:

<http://maps.conservation.ca.gov/cgs/radon/>

The attached screen shot shows the levels of Radon that could potentially be on our homes. In the bright red areas of this map, it indicates the potential for 20 percent of the homes to have radon levels greater than 4 pi / liter. Why is this important? Because the potential for naturally occurring radionuclides in my area - the Radon level - is close to the levels set for MCLS. So to me, it would be important to understand what levels of these radionuclides both at the SSFL site as well as in the communities around the site are from naturally occurring sources. How much radium would you need to get to 4 pi/ liter of radon?
<https://certmapper.cr.usgs.gov/data/PubArchives/radon/georadon/2.html>

I think it is important to my community to have FACT SHEETS on the following issues:

- 1) The levels of naturally occurring radionuclides in the communities surrounding the SSFL site.
- 2) A fact sheet that specifically addresses the previous cleanup standards of the SSFL site, especially at the SRE and around other reactors which are referenced as "other partial meltdown locations".
- 3) Fact sheets related to each nuclear operational area - SNAP, SRE, RMHF, etc, that are written in the language that stakeholders can understand not in numbers which we have to calculate - for example : 10 - 6 equals what risk of cancer?
- 4) A fact sheet based on the historical documents and the SRE Expert Panel Workshop.

I had hoped that the WaterBoard staff would weigh in on the DOE DEIS because of the potential soil removal and its impacts on what will eventually become exceedences not only at the Outfalls for The Boeing Company's storm water permit, but also for the whole Regional Board basin plan. I do hope that the WaterBoard did weigh in during this comment period.

I will continue my search for that source of the previous cleanup standard for AREA IV as referenced by the EPA I believe someplace? Maybe I read it in their Final Radiological Survey for AREA IV document or in one of their Fact Sheets? I do not know. I was unable to find it when I looked for it in the various chapters of the DEIS.

Respectfully submitted,

Christine L. Rowe

166-1

166-1 The previously used soil cleanup-goal/release-criteria for Cs-137 under the EA (DOE 2003) was 9.2 picocuries per gram and was based on a dose based cleanup standard of 15 millirem per year (the EPA dose standard at the time). The activity concentration that equates to 15 millirem per year varies by radionuclide; for example the corresponding activity concentration for Sr-90 is 36 picocuries per gram.

166-2

166-2 While there are no health physicists on the local DOE staff at SSFL, DOE has access to health physicists throughout DOE complex should it be necessary to consult with one.

166-3

166-3 DOE appreciates the commenter's interest in researching the information relative to cleanup of SSFL, including the surrounding environment. DOE has been proactive in informing the public about the range of subjects relative to remediation and cleanup of Area IV and the NBZ. From December 2008 through April 2015, DOE published CleanUpdate, a newsletter about DOE's activities at SSFL Area IV and topics of community interest. Past issues have addressed co-located sampling, groundwater studies, the AOC, biological studies, soil background studies, and other timely topics related to the history and cleanup of SSFL Area IV and the NBZ. Links to these newsletters and other documents about DOE's activities at SSFL, including site characterization reports, site operations and history, the seven-part "Groundwater U" held in the spring of 2011, the SRE accident and workshop, and much more information are available on the Energy Technology Engineering Center website at <http://www.etc.energy.gov/>. DOE has also prepared fact sheets and posters relative to the EIS and its activities at SSFL in conjunction with scoping meetings and the public hearing on the Draft EIS are also available on the Energy Technology Engineering Center website. Specific information may be found as follows:

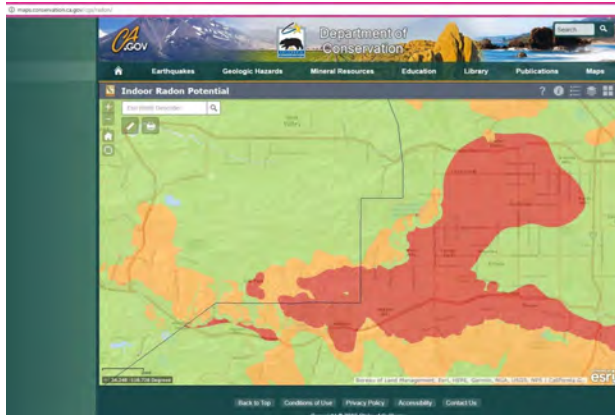
- The results of the most recent EPA radiological survey and sampling program for Area IV and the NBZ can be accessed at http://www.etc.energy.gov/Char_Cleanup/EPA_Soil_Char.html. This study was completed in December 2012.

Commenter No. 166 (cont'd): Christine Rowe

- Throughout site operations and afterward, DOE implemented a number of removal actions to remediate soil, bedrock, and structures (e.g., buildings, transformers, and parking lots) with concentrations of radionuclides or chemicals that exceeded the cleanup standards used at the time. The most notable of these removal actions are summarized in Chapter 3, Section 3.2.5.3, of this Final EIS.
- Information about the various nuclear research programs conducted at Area IV, and the facilities at which these programs took place, can be obtained searching the DOE Energy Technology Engineering Center website.
- Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS contain summaries of the 1959 SRE accident and the SRE Expert Panel Workshop. Additional information can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html and http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html.
- Chapter 4, Section 4.9.1, of this final EIS provides an overview of the risk assessment process, including an explanation of human health impact assessment terms and methodology to assist the reader in understanding the potential human health impacts in the EIS.

166-4 As described in Chapter 4, Section 4.3.1 of this Final EIS, with the implementation of best management practices and Mitigation Measures SW-1 and SW-2, remediation activities are not expected to produce exceedances of NPDES permit limits at the land owners (Boeings) outfalls.

Commenter No. 166 (cont'd): Christine Rowe



WQCP Table 3-12a. The Maximum Contaminant Levels (MCLs) and Detection Levels for Purposes of Reporting (DLRs): Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium (for MUN beneficial use) specified in Table 64442 of Section 64442 of Title 22 of the California Code of Regulations as of February 2013

Radionuclide	MCL (pCi/L)	DLR (pCi/L)
Radium-226	5 (combined radium-226 & -228)	1
Radium-228		
Gross Alpha particle activity (excluding radon and uranium)	15	3
Uranium	20	1

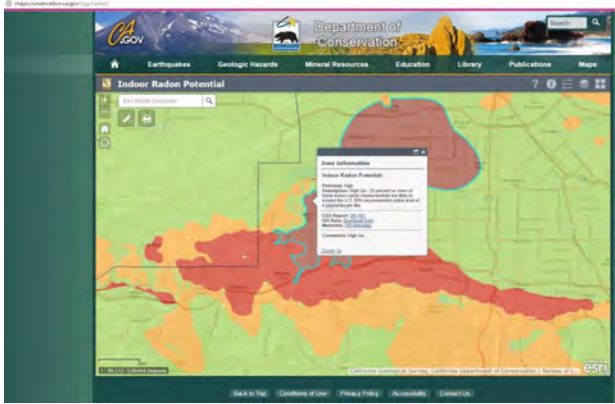
WQCP Table 3-12b. The Maximum Contaminant Levels (MCLs) and Detection Levels for Purposes of Reporting (DLRs): Beta particles and Photon Radioactivity (for MUN beneficial use) specified in Table 64443 of Section 64443 of Title 22 of the California Code of Regulations as of February 2013

Radionuclide	MCL	DLR (pCi/L)
Beta/gamma emitters	4 millirem/year annual dose equivalent to the total body or any internal organ	(Gross Beta particle activity: 4pCi/L)
Strontium-90	8 pCi/L (4 millirem/yr dose to bone marrow)	2 pCi/L
Tritium	20,000 pCi/L (= 4 millirem/yr dose to total body)	1,000 pCi/L

Source: Water Quality Control Plan (LARWQCB, 2013)

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Commenter No. 166 (cont'd): Christine Rowe



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Commenter No. 167: Christine Rowe

From: Christine Rowe [REDACTED]
Sent: Thursday, April 13, 2017 11:36 PM
To: Jennings, Stephanie
Cc: [REDACTED]
Subject: Re: Department of Energy Draft Environmental Impact Statement Comment
Attachments: EPA HISTORICAL SITE ASSESSMENT REFERENCES SB 990.jpg

Dear Ms. Jennings,

In my search for that previous cleanup level for radionuclides, I found this reference by the EPA that references that the standards needed to comply with SB 990. At the date of this document, in October 2010, I do not believe that the AOCs had been signed yet.
[https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/4e0a55fc2b26ad62882579de00781794/\\$FILE/ATTSAVU3.pdf/Draft%20HSA-5B_10_25_2010.pdf](https://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/4e0a55fc2b26ad62882579de00781794/$FILE/ATTSAVU3.pdf/Draft%20HSA-5B_10_25_2010.pdf)

This is, to me, further proof that the DOE was working under SB 990 at the time of the radiological survey and the DOE sampling with DTSC.

This is further justification why the "AOC should go away" - it was written to comply with SB 990 which was found to be unconstitutional and is not risk based.

Respectfully submitted,

Christine L. Rowe

167-1

167-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 167 (cont'd): Christine Rowe

Santa Susana Field Laboratory
Historical Site Assessment
Draft Technical Memorandum: Area IV, Sabarea HSA-5B **October 2010**

The objective of the HSA component of the radiological study is to provide a comprehensive investigation that identifies, collects, organizes, and evaluates historical information relevant to nuclear research operations as it pertains to radiological contamination in the Area IV Study Area. Once these areas have been identified, potential areas where radiological contamination may exist at the site will be identified for gamma scanning or sampling.

This work is being executed by HGL under EPA Contract EP-S7-05-05, Task Order (TO) 0038 under the technical direction and oversight of EPA Region 9. In accordance House Resolution (HR) 2764, the Department of Energy (DOE) is funding EPA's Area IV Study. DOE elected to fund EPA's study with funding allocated under the American Recovery and Reinvestment Act (ARRA) of 2009. An important regulatory consideration for planning cleanup work at SSFL is California State Senate Bill 990 (SB 990), which can be interpreted to require that the SSFL site be thoroughly remediated to background levels for both chemical and radioactive contamination, as determined by the California Department of Toxic Substances Control (DTSC), before any sale, lease or transfer of all or any part of the SSFL property.

167-1
cont'd

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Commenter No. 168: Christine Rowe

From: Christine Rowe
To: [Jennings, Stoodman](#)
Cc: [James, Mike](#); [Kramer, Debbie](#); [Barbara A. Lee](#); [Leclerc, Ray](#); [Mark Malinowski](#); [Babin, Marcia](#); [geter,andy](#); [MANNIS, LORE \(MSFC-ASD\)](#); [GREAT SOUTHERN ENGINEERING](#); [DIX, Zeller, Mark E](#); [Kamara Sams](#); [Cassandra Owens](#); [Hana, David](#); [Gonzalo,Josey-Ross,Huck](#); [Lynn, Roger \(OTM\)](#); [DFDRS-BH8](#); [Thomas, James \(COMPLS-DFDRS-RH8\)](#)
Subject: Re: DOE DEIS Comments from Christine L. Rowe
Date: Thursday, April 13, 2017 6:38:35 AM
Attachments: [DOE DEIS Comments by Christine L. Rowe April 13 2017.pdf](#)

Ms. Jennings,

In case anyone cannot read the Power point, I am also sending the pdf version now.

Attached.

Christine L. Rowe

On Thu, Apr 13, 2017 at 3:31 AM, Christine Rowe wrote:

Dear Ms. Jennings,

I am submitting my comments in the form of a Power point at this time. Due to time constraints, I was not able to make all of my points based on my reading of parts of your DOE DEIS. Reading this document has sent me on many journeys through so many other documents as you will see.

I do intend to submit further comments but I recognize that they may not get in on time for DOE's response, but they will then be ready for when DTSC's Draft EIR is released.

I have also saved this in a pdf format if you would prefer that I send this document in that format.

Respectfully submitted,
 Christine L. Rowe
 39 + year resident of West Hills
 DOE Technical Stakeholder, STIG member,
 and DOE Section 106 Consulting Party

|| 168-1

168-1

The 60-day public comment period began on January 13, 2017 and was scheduled to end on March 14, 2017. In response to requests from stakeholders, on March 7, 2017 the public comment period was extended to April 13, 2017. Late comments were considered to the extent practicable in preparing this Final EIS.

Commenter No. 168 (cont'd): Christine Rowe

**DEPARTMENT OF ENERGY SANTA
SUSANA FIELD LABORATORY DRAFT
ENVIRONMENTAL IMPACT
STATEMENT
APRIL 13, 2017**

**COMMENTS BY
CHRISTINE L. ROWE
B.S. IN HEALTH EDUCATION - CSUN**

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PURPOSE AND NEED

- **The Purpose and Need for the Draft Environmental Impact Statement is two fold in my opinion:**
- **1) For the Department of Energy to comply with the National Environmental Policy Act; and**
- **2) To comply with the ruling by Judge Samuel Conti for the Department of Energy to complete an Environmental Impact Statement:**
- **http://www.etec.energy.gov/Library/Cleanup_and_Characterization/EIS/MSJ_ORDER.pdf**

168-2

168-2

The purpose and need statement in an EIS is not the purpose and need for preparing the EIS. CEQ and NEPA regulations (40 CFR 1502.13) state an EIS “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives, including the proposed action.” As stated in Chapter 1, Section 1.1 of this Final EIS, DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements. To this end, DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers.

TO PROTECT PUBLIC HEALTH, PUBLIC SAFETY, AND THE ENVIRONMENT

- 1) The purpose of commenting in this format is to allow me to show screen shots from various documents and websites which are technical in nature.
- 2) The cleanup of the Santa Susana Field Laboratory site should be based upon the Risks to local residents today and throughout this cleanup; the potential risks along the truck routes; the potential risks to the future users of the SSFL site; particular risks should be paid to the impacts on the Brandeis Bardin Camp, residents of Bell Canyon, Dayton Canyon, and Runkle Canyon; and the risks to the communities in which the landfills are located.

168-3

168-3

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. This Final EIS (see Section 4.9) also evaluates risks to future onsite recreational users.

Commenter No. 168 (cont'd): Christine Rowe

NEEDS ASSESSMENT

COMPREHENSIVE NEEDS ASSESSMENT



Summary of Foundation Concepts

- A "need" is a discrepancy or gap between "what is" and "what should be"
- A "needs assessment" is a systematic set of procedures that are used to determine needs, examine their nature and causes, and set priorities for future action.
- In the real world, there is never enough money to meet all needs. Needs assessments are conducted to help program planners identify and select the *right job* before doing the *job right*.

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MY GOALS

- **As an undergrad in Health Education at Cal State University, Northridge, I was taught how to perform a Needs Assessment.**
- **It is my opinion that the Decision Makers to date have been “reactive to media and community concerns” rather than requesting scientifically based studies to inform them regarding the future courses of action.**
- **As an Santa Susana Field Laboratory (SSFL) Technical Stakeholder for more than ten years, my comments will be based on the Department of Energy’s Draft Environmental Impact Statement**

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Commenter No. 168 (cont'd): Christine Rowe

2007 CONSENT ORDER

In 2007, DTSC issued the *Consent Order for Corrective Action* (2007 CO) (DTSC 2007) to DOE, NASA, and Boeing (as respondents), pursuant to DTSC's authority over hazardous waste under the California Health and Safety Code, Section 25187. The 2007 CO requires the respondents to clean up all chemically contaminated soils¹ and groundwater at SSFL to risk-assessment-based levels. The risk-assessment-based levels are based on a suburban resident scenario established for SSFL in the *Final Standardized Risk Assessment Methodology Revision 2 Addendum, Santa Susana Field Laboratory, Ventura County, California* (SRAM) (MWH 2014),² which assumed a receptor would be present on the site 24 hours per day, 350 days per year, for 30 years. The 2007 CO required further

¹ The 2010 AOC (DTSC 2010a) superseded the 2007 CO (DTSC 2007) with respect to cleanup of chemically and radioactively impacted soils; however, it incorporated the 2007 CO by reference for groundwater remediation. The 2010 AOC also added building demolition.

² The 2007 CO cited a 2005 version of the SRAM Work Plan. The currently applicable version of the SRAM (MWH 2014) was issued in 2014.

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2010 ADMINISTRATIVE ORDER ON CONSENT

The SRAM (MWH 2014) describes a risk-assessment methodology for determining the areas that would need remediation. A hypothetical future suburban residential land use was identified for the evaluation of risk; other plausible receptors (such as recreational users or workers) were also identified.

In 2010, DOE entered into the 2010 AOC (DTSC 2010a) with DTSC. The 2010 AOC superseded the 2007 CO with respect to soil remediation and changed the framework for the soils characterization and cleanup process for Area IV and the NBZ.³ The 2010 AOC stipulated that the soils cleanup standard would be based on LUT values, which are: (1) for chemicals, local background concentrations or method detection limits⁴ for those chemicals whose method detection limits exceed local background concentrations, and (2) for radionuclides, local background concentrations or minimum detection limits for radionuclides whose detection limits exceed local background concentrations. The 2010 AOC defines the minimum detection limit for a radionuclide as the smallest amount of activity that can be quantified for comparison with regulatory limits.⁵ The 2010 AOC indicates that, for soil remediation decisions, DOE is to compare the concentration of any chemical or radionuclide in each individual sample (not an average of samples in an area) with its respective LUT value. Thus, any soil samples that do not meet the LUT values for all chemicals or radionuclides would require a cleanup action to be taken.

The 2010 AOC (DTSC 2010a) identified characterization activities for both chemical and radiological contaminants and requires DOE to prepare a Soils Remedial Action Implementation Plan (SRAIP)⁶ describing where soil cleanup will occur, any areas proposed for exemptions to protect biological or cultural resources, and any areas proposed for *in situ* or onsite treatment to

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Commenter No. 168 (cont'd): Christine Rowe

2010 ADMINISTRATIVE ORDER ON CONSENT

³ The 2007 CO remains in effect for groundwater remediation.

⁴ Per the 2010 AOC, "detection limit" means the method reporting limit, which is the lowest concentration at which an analyte can be confidently detected in a sample and its concentration can be reported with a reasonable degree of accuracy and precision.

⁵ In its *Final Technical Memorandum, Look-Up Table Recommendations, Santa Susana Field Laboratory Area IV Radiological Study* (HGL 2012b), EPA stated: "In exercising independent technical judgment, as identified in Section 3.2 of the 2010 AOC (DTSC 2010a), EPA recommends an adjustment to the BTVs [background threshold values] and minimum detectable concentrations [limits] (MDCs) to include appropriate consideration for [method uncertainty] to ensure an acceptably low decision error rate of approximately 5 percent. This adjustment is not believed by EPA to be contrary to the 2010 AOC requirement that LUT values incorporate BTVs and laboratory MDCs." The memorandum also stated: "For purposes of this technical memorandum, and for the appropriate use of BTVs, it is important to note that the MDC is not used as a detection decision criterion. Rather, the MDC is understood to represent a level of activity at which the associated uncertainty becomes predictably constrained to a level that is useful for defining a substitute cleanup value when the BTV is not practically or technologically supported by the laboratory data. The use of the MDCs in this case, defined as "the smallest amount of activity that can be quantified for comparison with regulatory limits," is consistent with the 2010 AOC requirements and definitions."

⁶ The 2010 AOC requires DOE to prepare a SRAIP that includes a site description and history and a description of the nature and extent of radiological and chemical contamination, planned remedial actions, proposed exemptions, proposed areas for onsite treatment, proposed mitigations to address environmental impacts, and schedule. DOE may prepare multiple SRAIPs to address different implementation phases. DOE anticipates submitting the first of three planned SRAIPs to DTSC at the same time that DTSC issues the final program environmental impact report.

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THE 2010 CONSENT ORDER – HOW DID WE GET THERE?

- In August 2007, DTSC signs the 2007 Consent Order with The Boeing Company, NASA, and the Department of Energy (DOE)
- In October 2007, Senate Bill 990 is signed into law by Governor Schwarzenegger. This bill becomes a part of the State Health and Safety Code.
- In the meantime, the Federal Environmental Protection Agency has been asked to determine if the whole SSFL site qualifies as a Federal Superfund site. Historically, the whole SSFL site (to the best of my understanding) was not considered, and it had been previously assessed for radionuclides – it did not “score”, it was assessed for chemicals – it did not “score”.
- In December 2007, the SSFL site was determined to be eligible for listing as a Federal Superfund site based upon the Groundwater contamination site wide:
- <https://www3.epa.gov/region9/superfund/santanusana/SSFL-PASI-report-r2-complete.pdf>

168-4

168-4

As described in Chapter 1, Section 1.3 of this Final EIS, in December 2007 EPA released a Hazard Ranking Survey of SSFL and recommended further assessment. Based primarily on trichloroethylene in groundwater under Area I and II, the score exceeded the threshold for listing on the National Priorities List. In January 2009, the State of California indicated that it did not support listing on the National Priorities List. EPA decided not to list SSFL on the National Priorities List and DTSC continued as the lead regulatory agency.

Commenter No. 168 (cont'd): Christine Rowe

EPA SSFL PRELIMINARY SITE ASSESSMENT

The following pertinent Hazard Ranking System (HRS) factors are associated with the site:

- A release of TCE to the groundwater beneath the SSFL site is well documented. Analytical data indicate that both the shallow aquifer and the deeper Chatsworth Formation aquifer have been contaminated with TCE. Although other contaminants have been detected, TCE is the compound detected with the highest concentration and greatest frequency.
- TCE was detected in the groundwater as early as 1980. Records indicated that TCE was detected in a drinking water well at a concentration of 9 parts per billion (ppb), which exceeded the State and Federal drinking water limits of 5 ppb. Approximately 330 people were subjected to contaminated groundwater from this drinking water well. The well was shut down due to the contamination, and bottled drinking water was provided. The groundwater beneath the SSFL site continues to be contaminated, with current concentrations of TCE as high as 110,000 ppb.
- The groundwater beneath the SSFL site forms a regional groundwater high, therefore, there are no up gradient sources of contamination.
- Currently, there are approximately 7,624 people that receive groundwater from a blended municipal drinking water system that is located between a 3-4 mile radius from the site.
- Groundwater beneath the SSFL site discharges to the surface water at 28 spring/seep locations. Recent data indicated that TCE has been detected at one of the spring/seep locations. The SSFL site and surrounding land support habitat for endangered and threatened species. These species have the potential to be exposed to surface water contamination at the site.

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JANUARY 2008

1) The CAL EPA Director learns that the Federal EPA would not recognize SB 990 as an ARAR:

“Applicable or Relevant and Appropriate Requirements”:

<https://www.epa.gov/superfund/applicable-or-relevant-and-appropriate-requirements-arars>

2) The EPA does not normally list a site without concurrence from the Governor. The Governor’s office and the Cal EPA Director are lobbied to not list the SSFL site.

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Commenter No. 168 (cont'd): Christine Rowe

January 2008 – Part 2

- 3) The CAL EPA Director releases three documents: one to the Federal EPA Region IX Director that states that the State does not want to list the site at this time; one that does not require an amendment to Senate Bill 990; and one that is an agreement with
- “ SSFL Stakeholder Groups” which support SB 990.

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Commenter No. 168 (cont'd): Christine Rowe

The 2009 Consent Order

- After SB 990 became law, DTSC tried to work with the three Responsible Parties: The Boeing Company, NASA, and the DOE, to incorporate SB 990 into the 2007 Consent Order.
- Meetings were held at the DTSC Chatsworth office as well as a meeting with the West Hills Neighborhood Council Board members
- In October 2009, the Statute of Limitations on SB 990 had run out. It is my opinion, based on documents that I read at that time, that The Boeing Company was not being given the same reservation of rights to litigate in the future as was DTSC, NASA, and the DOE.

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Commenter No. 168 (cont'd): Christine Rowe

**The Boeing Company Sues DTSC
RE: SB 990**



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In the meantime, DTSC negotiates with NASA and the Department of Energy

- In 2010, DTSC introduces the Agreement in Principles with NASA and the DOE.
- Each of these “Agreements in Principle” are incorporated into the separate 2010 Administrative Orders on Consent between DTSC and NASA and DTSC and the DOE.
- The DOE and NASA do not sign onto the Boeing lawsuit against DTSC.

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Commenter No. 168 (cont'd): Christine Rowe

**The Agreement in Principle
from a DTSC Power point**



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AGREEMENT IN PRINCIPLE - WHAT DOES IT DO?

www.dts-csfl.com/files/0_p4i_jr/volve/meeting_agendas/meeting_agendas_etc/64728_AgreementInPrincipleB-22-11.pdf

A Path Forward

- Resolves disagreements over interpretations and implementation of SB 990 (Kuehl, 2007)
- Fast forwards the process to where it will likely end up (years from now)
- Provides certainty to all and eliminates concerns about the unknown outcome of "process"
- Takes advantage of U.S.EPA's ongoing site survey and soil sampling work **and** U.S.EPA's expertise on radiological contamination

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Commenter No. 168 (cont'd): Christine Rowe

SB 990 – WHAT DOES IT REQUIRE?

SB 990

- What it says:
 - Requires cleanup standards for radioactive and chemical contaminants based on “rural residential” land use assumptions
 - Includes the pathways: ingestion of soil, dermal contact with soil, inhalation of dust, ingestion of fruits and vegetables, beef, milk, poultry, eggs, swine, and fish, assumed to be produced on the site.
 - Clarifies that risk due to both radioactive and chemical contaminants must be added
 - Requires uses of the State Superfund process

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NINE BALANCING CRITERIA

Nine Balancing Criteria

1. Overall protection of human health and the environment
 2. Compliance with Applicable, Relevant and Appropriate Requirements
 3. Long-term effectiveness and permanence
 4. Reduction of toxicity, mobility, or volume
 5. Short-term effectiveness
 6. Implementability
 7. Cost
 8. State acceptance
 9. Community acceptance
-

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Commenter No. 168 (cont'd): Christine Rowe

**THE ADMINISTRATIVE ORDERS ON
CONSENT – WHAT DO THEY DO?**

1.6. Compliance with State Law. DTSC agrees that compliance with this Order and the 2007 Order shall constitute DOE's full and complete compliance with all applicable provisions of Chapters 6.5 and 6.8 of Division 20 of the California Health and Safety Code (the California Hazardous Waste Control Law, Sections 25100 *et seq.* of that Code, and the California Hazardous Substances Account Act, Sections 25300 *et seq.* of that Code), including specifically, but not limited to, California Senate Bill 990 (Stats. 2007, c. 729), which has been codified as Section 25359.20 of the California Health and Safety Code, but only with respect to the application of these provisions to radiologic or chemical contamination of soil at the Site or any contiguous radiologic or chemical contamination of soil emanating from within Area IV or the Northern Buffer Zone, within or without the SSFL boundaries, identified by EPA in its radiologic characterization survey or by DTSC as part of the investigation of chemical contaminants.

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**WHAT THE ADMINISTRATIVE ORDERS
ON CONSENT DO NOT REQUIRE**


- Development of risk assessments will not be required.
- As identified by EPA in its rad survey and by DTSC as part of the investigation of chemical contaminants, DOE will remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from within Area IV even to the extent that it migrates beyond

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Commenter No. 168 (cont'd): Christine Rowe

IN THE MEANTIME, WHAT HAS OCCURRED AT THE SSFL SITE TO PROTECT THE PUBLIC HEALTH AND THE ENVIRONMENT SINCE THE 2007 CONSENT ORDER?

https://www.dtsc.ca.gov/SiteCleanup/Projects/Upload/SSFL_FS_Order_1107.pdf



FACT SHEET November 2007

DTSC Issues Order to Boeing and NASA to Take Action on Sage Ranch

On November 1, 2007, the Department of Toxic Substances Control (DTSC) issued an Imminent and Substantial Endangerment Order (Order) to The Boeing Company (Boeing) and the National Aeronautics and Space Administration (NASA) for the cleanup of Asbestos Containing Material (asbestos) and polycyclic aromatic hydrocarbons (PAHs) along the northern boundary (please see the map on page two) of the Santa Susana Field Laboratory (SSFL). The SSFL is located in the Santa Hills in the south-eastern portion of Ventura County, California, approximately 30 miles northwest of downtown Los Angeles.

DTSC issued this order under its authority in the California Health and Safety Code. Since the contamination is on adjacent property and potentially accessible to the public, DTSC is requiring quick action and is sending this fact sheet to inform the community of the cleanup activities. During the development of the Order, we briefed community representatives regarding the sampling results and the need for cleanup.

The Mission of the Department of Toxic Substances Control is to provide the highest

Response side of this page intentionally left blank.

Commenter No. 168 (cont'd): Christine Rowe

THE LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD ORDERS BOEING TO HIRE THE BOEING EXERT STORM WATER PANEL

INTERIM SOURCE REMOVAL ACTION

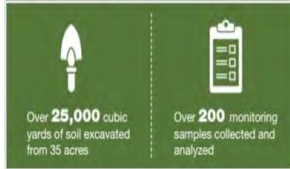
In 2013, Boeing completed its Interim Source Removal Action to improve water quality in two drainage locations in the northern and southeastern portions of the Santa Susana site. This effort involved identifying, evaluating and remediating areas of soil to remove constituents believed to be affecting stormwater runoff.

Boeing minimized the potential impact on streambeds and habitats by conducting biological surveys before targeted field work began in 2009. The Santa Susana Stormwater Expert Panel developed stabilization measures to prevent rainy season erosion and enhance long-term restoration.

Before any soil was removed from the site, it was sampled and characterized to determine the presence of any chemical or radiological constituents. All excavated soil was transported by trucks, using appropriate protective measures, to facilities that are legally permitted to dispose of such soils.

While the Regional Board oversees the ISRA activities, it worked closely with the agency responsible for the final site-wide cleanup, the California Department of Toxic Substances Control, as well as Ventura County, California Fire and Wildlife and the U.S. Army Corps of Engineers.

ISRA BY THE NUMBERS



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Commenter No. 168 (cont'd): Christine Rowe

http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html Workshop

"SRE Workshop

Aerial view of the Sodium Reactor Experiment facility.

Some people believe that the July 1959 accident involving the Sodium Reactor Experiment was the worst nuclear accident in US history. Others believe the accident was much more benign. In response to stakeholder requests for more information about what happened, DOE hosted an informational workshop on August 29, 2009 designed to explore the diverse expert and community perspectives on what occurred prior to, during, and immediately after the accident.

The workshop began with presentations from three independent experts: Dr. Paul Pickard of Sandia National Laboratories, Dr. Thomas Cochran of the Natural Resources Defense Council, and Dr. Richard Denning of Ohio State University. Over 185 workshop attendees then had an opportunity to ask questions of these experts. Finally, community members had an opportunity to provide their own perspectives on what occurred."



Aerial view of the Sodium Reactor Experiment facility.

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Commenter No. 168 (cont'd): Christine Rowe

**The Sodium Reactor Experiment area – Taken by me
with Boeing’s permission on a Public Site Visit**



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Commenter No. 168 (cont'd): Christine Rowe

Public Health Studies

- Numerous site risk assessments and community health studies have been performed over the past few decades
- The DOE has links to most of these studies on their website:
- http://www.etec.energy.gov/Environmental_and_Health/Community_Health.html

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Commenter No. 168 (cont'd): Christine Rowe

ATSDR REVIEW OF SSFL

ATSDR Public Health Assessment

The Agency for Toxic Substance and Disease Registry (ATSDR) is a part of the Center for Disease Control (CDC) which is operated by the Federal Department of Health and Human Services (DHHS). The ATSDR received a request to conduct a public health assessment at the Santa Susana Field Laboratory (SSFL). ATSDR held meetings with the public in the Fall of 1999 to identify health concerns and completed a preliminary site evaluation in December 1999.

- [Draft Preliminary Site Evaluation Santa Susana Field Laboratory \(SSFL\), Ventura County, California, December 1999](#)

The preliminary site evaluation executive summary states that *"preliminary results of the exposure pathway analyses for air, ground water and surface water, and soil and sediment indicate that it is unlikely that people living in communities near the site have been exposed to substances from the site at levels that would have resulted in adverse health effects"*.

The ATSDR recommended further studies to assess potential off site exposure pathways to contaminants, update the prior state cancer registry studies, and perform public outreach. As a result, ATSDR contracted with the Eastern Research Group (ERG), who in turn issued a sole source contract to the University of California at Los Angeles (UCLA) to assess potential off site exposure. [Click here](#), for more information about the UCLA offsite exposure studies.

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Commenter No. 168 (cont'd): Christine Rowe

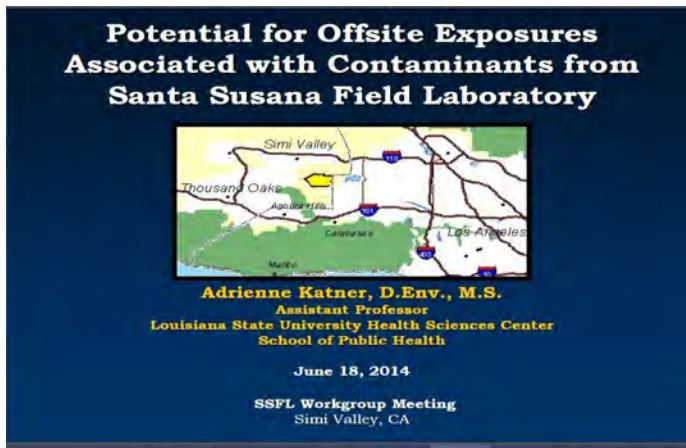
UCLA OFFSITE STUDY OF EXPOSURE PATHWAYS: THE PROBLEM TO ME – IT WAS PEER REVIEWED, AND THEY DID NOT RESPOND TO THE PEER REVIEW



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Commenter No. 168 (cont'd): Christine Rowe

**DR. ADRIENNE KATNER SHOWS THEIR 2003
SLIDES TO THE SSFL WORKGROUP IN 2014**



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Commenter No. 168 (cont'd): Christine Rowe

**DR. ADRIENNE KATNER STATES ON PAGE 3 OF HER
POWERPOINT IN 2014 THAT SHE HAS:
“No knowledge of current status of site”**

Limitations

- Conservative assumptions used to estimate some contaminant concentrations and exposures
 - Report characterizes *potential* exposures
 - No conclusions made with regards to *real risks*
 - Results most useful for *prioritizing* future monitoring and remediation efforts
- Report based on data collected *up to 2003*
 - Report characterizes potential exposures *up to 2003*
 - No knowledge of current status of site

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Commenter No. 168 (cont'd): Christine Rowe

My question by video to Dr. Katner at that SSFL Workgroup meeting was:

- “What is the point of presenting old data prior to 2003 when you don’t know the status of the site today?” or similar words.
- Dr. Katner’s response was to look at page 3 of her presentation where her “Limitations” were addressed as in the above slide.

Response side of this page intentionally left blank.

Commenter No. 168 (cont'd): Christine Rowe

**Cancer Incidence in the Community Surrounding
the Rocketdyne Facility in Southern California**

**Cancer Incidence in the Community Surrounding
the Rocketdyne Facility in Southern California**

Final Report
to
Eastern Research Group
Lexington, MA 02421-3136
Subcontract No. CDC-10039/2

Prime Contactor:
Agency for Toxic Substances and Disease Registry (ATSDR)
Centers for Disease Control and Prevention (CDC)
Contract No. CDC 200-2000-10039

Hal Morgenstern, Ph.D.
Principal Investigator

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Morgenstern Cancer Study Results 1

Results: Associations between distance from SSFL and cancer incidence differed by type of cancer outcome. Standardized incidence rate ratios were close to 1, indicating little or no association, for total cancers and radiosensitive cancers among adults, but the incidence rate of chemosensitive cancers was slightly elevated during both follow-up periods in the population living within 2 miles of SSFL. Results for the 9 specific cancers revealed some elevated incidence rates between 1988 and 1995 among persons living within 2 miles of SSFL. Specifically, the standardized incidence rate ratio was greater than 1.6 for cancers of blood and lymph tissue, bladder, thyroid, and upper aerodigestive tract. Between 1996 and 2002, the rate ratio among persons living within 2 miles of SSFL was greater than 1.6 for thyroid cancer. There were too few childhood cancers to yield informative results.

Discussion: The strongest and most consistent association observed in this study was for thyroid cancer, which was associated with distance from SSFL in both follow-up periods. This finding may have public-health significance because perchlorate, a component of rocket fuel used in large quantities at SSFL, is known to disrupt thyroid function; it has been shown to induce thyroid tumors in laboratory animals, and there is evidence from two other investigations that perchlorate migrated offsite to contaminate the groundwater in areas surrounding SSFL. In addition, findings from one of those other studies suggest that the 1959 partial meltdown of a nuclear reactor at SSFL could have released appreciable amounts of radioactive cesium and iodine, which might have increased the incidence of thyroid cancer in the population surrounding SSFL. Furthermore, our results for cancers of the bladder, blood and lymph tissue, and upper aerodigestive tract are consistent with associations observed in the UCLA Worker Study between mortality from these cancers and occupational exposures to radiation and chemicals.

It is important to recognize that associations observed between distance from SSFL and the incidence of specific cancers are based on small numbers of cases in the region closest to SSFL. Thus, these associations are estimated imprecisely and may represent chance findings. In addition, observed associations may have been biased by certain methodologic limitations—use of distance from SSFL as a crude proxy measure for environmental exposures, mobility of the residential population before and during the follow-up period, and lack of information on other cancer risk factors, such as cigarette smoking and socioeconomic status, that might distort the observed associations.

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Commenter No. 168 (cont'd): Christine Rowe

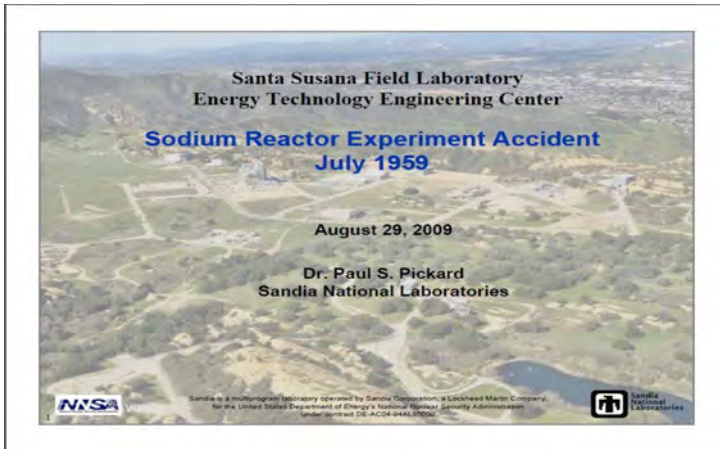
The problems with the Morgenstern study in my opinion

- 1) Dr. Morgenstern was influenced by the Cohen / Katner offsite exposure assessment which as I have stated – they did not respond to peer review. When I read that peer review response, it left me with many questions related to the accuracy of the offsite exposure study.
- 2) Dr. Morgenstern is of the understanding and references a “1959 partial meltdown” at the SSFL site which he indicates could have released “appreciable amounts of radioactive cesium and iodine.”

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Commenter No. 168 (cont'd): Christine Rowe

**Sodium Reactor Experiment Accident –
SRE WORKSHOP AUGUST 2009**



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Commenter No. 168 (cont'd): Christine Rowe

**DR. PAUL PICKARD'S OBSERVATIONS REGARDING
IODINE AND CESIUM AFTER THE 1959 SRE INCIDENT**



Observations and Comments

- Existing documentation from 1959 provides a reasonable description of the SRE accident and causes
- Fuel and cladding damage causes and mechanisms are consistent with current understanding
- The inventory was re-calculated using current tools and data, which confirmed original inventory estimates for important fission products
- Conclusions:
 - Absence of iodine radionuclides in the cover gas is consistent with known chemical mechanisms
 - Metal fuel and sodium form nonvolatile iodides
 - Similar observations from EBR-II and other experiments
 - From this review, primary release should have been noble gases
 - The July accident itself should not have resulted in major releases of volatile fission products



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WHAT IS THE PROBLEM – BACK TO THE NEEDS ASSESSMENT QUESTION

- 1) **The first problem is that the media and local activist groups continue to perpetuate the “Meltdown Myth”**
- 2) **The second problem is that these groups are using old data including the Katner study from 2003 to “prove” offsite risk in the surrounding communities**
- 3) **The third problem is that these people lead local residents to believe that their cancers and other illnesses are caused by the SSFL site**
- 4) **The fourth problem is that even the epidemiologists cannot prove or disprove whether a cancer was caused by the SSFL site**
- 5) **The fifth problem is that very few people are looking at the health studies, and they turn to people who they believe are “experts” rather than, to the best of my understanding, find the appropriate experts at the California Cancer Registry.**
- 6) **Some local activists dispute the findings of Dr. Thomas Mack of USC who did a study surrounding the SSFL for DTSC in 2014.**

168-5

168-5

Thank you for your comment. It has been added to the Administrative Record for the EIS. Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS contain information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. At the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements (see Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD). Additional information about the 1959 SRE accident can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html.

168-6

168-6

Thank you for your comment. It has been included in the Administrative Record for the EIS. Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD presents additional discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 168 (cont'd): Christine Rowe

**Dr. Thomas Mack of USC Presentation at the
DTSC Open House – April 2014:** http://www.dtsc-ssf.com/files/lib_pub_involve/meeting_agendas/meeting_agendas_etc/66362_Santa_Susana_8.pdf

Cancer Occurrence in Offsite Neighborhoods
Near the Santa Susana Field Laboratory

Thomas Mack, M.D., M.P.H.
Keck School of Medicine
University of Southern California

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**Dr. Mack's Five Mile Radius from the
SSFL map**



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Commenter No. 168 (cont'd): Christine Rowe

Dr. Mack's Conclusions

Conclusion

- It is not possible to completely rule out any offsite carcinogenic effects from SSFL
- No evidence of measureable offsite cancer causation occurring as a result of emissions from the SSFL was found.
- Further, no evidence of any cancer causation by any environmental factor was found.

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Additional Concerns

- It is my opinion as a stakeholder of the SSFL community for greater than ten years that:
- 1) Most people do not understand what a cancer cluster is;
- 2) Most people do not understand the difference between correlation and causation;
- 3) When you or a loved one or friend has cancer or another illness, you want to find a cause;
- 4) It is my opinion that most people would prefer to believe that a cancer is caused by an environmental factor that is out of their control – such as the SSFL site, rather than look at other potential causes which could be genetic in nature, be something that was ingested by the mother during pregnancy (teratogen), something in the food that the mother or the child has eaten, or even the risks associated with airborne contaminates or traffic.

168-6
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Commenter No. 168 (cont'd): Christine Rowe

Back to SB 990 – What happened to the litigation of Boeing V DTSC?

Before: Alfred T. Goodwin, Andrew J. Kleinfeld,
and Barry G. Silverman, Circuit Judges.

Opinion by Judge Kleinfeld

SUMMARY**

Environmental Law

The panel affirmed the district court's decision that a California law governing cleanup of a federal nuclear site violated the doctrine of intergovernmental immunity.

The Boeing Co. challenged the validity of California's Senate Bill 990, which prescribes cleanup standards for radioactive contamination at Santa Susana Field Laboratory. SB 990 requires that the site be made suitable for subsistence farming, a more demanding standard than that imposed by a plan adopted by the federal Department of Energy.

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The 9th Circuit Court of Appeals Conclusions on SB 990

THE BOEING COMPANY V. RAPHAEL 3

The panel held that Boeing had standing because as landowner, it established injury in fact.

The panel held that SB 990 violated the doctrine of intergovernmental immunity because it regulated DOE's cleanup activities directly in violation of the Supremacy Clause. In addition, SB 990 discriminated against the federal government and Boeing as a federal contractor hired to perform the cleanup of the Santa Susana site.

The panel did not reach the question of whether the federal laws governing nuclear materials and cleanup of hazardous substances preempted the state law. It also did not reach Boeing's claim under 42 U.S.C. § 1983 for a declaratory judgment and an injunction.

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Commenter No. 168 (cont'd): Christine Rowe

**9th Circuit Court of Appeals re SB 990 -
2**

4 THE BOEING COMPANY V. RAPHAEL

OPINION

KLEINFELD, Senior Circuit Judge:

We affirm the district court's decision that a California law governing cleanup of a federal nuclear site violates the doctrine of intergovernmental immunity. Because we decide that the state law impermissibly regulates and discriminates against the federal government and its contractor, we do not reach the question of whether the federal laws governing nuclear materials and cleanup of hazardous substances preempted the state law. We need not reach Boeing's Section 1983 claim for a declaratory judgment and an injunction.

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Commenter No. 168 (cont'd): Christine Rowe

**9th Circuit Court of Appeals on SB 990 –
My interpretation – the State of California cannot dictate the how to
cleanup radioactive waste on a DOE site per Federal law**

The subject of this litigation is a state's authority, as opposed to the federal government's authority, to regulate the cleanup of radioactive pollution. The issue is whether the state may mandate more stringent cleanup procedures, not generally applicable within the state, to a particular site where the federal government undertook to clean up nuclear contamination it created. In the circumstances of this case, the answer is no.

So far, the federal Department of Energy, as successor to the Atomic Energy Commission, has supervised and implemented the cleanup of radioactive material. Under the Atomic Energy Act, DOE is responsible for establishing a comprehensive health, safety, and environmental program for managing DOE's nuclear facilities nationwide.¹ DOE has implemented that authority by issuing orders that set health and safety limits for radioactive releases and cleanup and site-closure procedures.²

168-7

168-7 DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to “advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety” (42 U.S.C. 7112(13)). The commenter is referred to Final EIS Chapter 2, Sections 2.1 and 2.2 for discussions regarding the history and legality of the AOC.

DTSC did not enforce SB 990 with respect to DOE, so DOE was under no duress attributable to SB 990 when the 2010 AOC was negotiated. The 2010 AOC states that DTSC agreed that compliance with the 2010 AOC would constitute DOE compliance with applicable provisions of the California Health and Safety Code (Section 1.6), including Senate Bill 990. However, after the law was declared unconstitutional, SB 990 was no longer enforceable.

Commenter No. 168 (cont'd): Christine Rowe

**9th Circuit Court of Appeals on DTSC's authority
to regulate the cleanup of chemical
contamination**

Non-radioactive chemical pollutants are regulated differently from radioactive pollutants.⁴ The California Department of Toxic Substances Control regulates the cleanup of chemical contamination, pursuant to an agreement with EPA authorizing state control, under a different federal statute from the one applicable to radioactive materials.⁵ The various state and federal agencies involved, and Boeing, agreed upon an order from California's Department of Toxic Substances Control to clean up the chemical contamination to a level adequate for suburban residential use. That order does not address the cleanup of radioactive materials.

This case arises from the State of California's decision to extend its control to cleanup of radioactive pollutants. In October 2007, California passed Senate Bill 990, "Cleanup of Santa Susana Field Laboratory," prescribing cleanup standards for both radioactive and chemical contamination.⁶ The statutory standard requires that the site be made suitable for "suburban residential or rural residential (agricultural)

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The 9th Circuit Court of Appeals interprets SB 990 requirements

10 THE BOEING COMPANY V. RAPHAEL

[use], whichever produces the lower permissible residual concentration” for each contaminant found at the site.⁷ The state statute does not further define the “rural residential (agricultural)” standard, but the federal EPA “agricultural” standard apparently intended by the state statute assumes “consumption of farm products for a subsistence farmer,” getting all his or her vegetables, fruit, meat, fish, and milk from the land, along with incidental consumption of soil and inhalation of dust.⁸ In effect, Senate Bill 990 (“SB 900”) would require that hypothetical subsistence farmers could live safely on their farms eating nothing but their chickens, eggs, crops, and cheese and drinking their milk from their cows eating the grass, in this patch of nuclear and chemical toxic waste in the Los Angeles suburbs.

Boeing and the federal agencies contend that this standard is more demanding than the usual practice under state and federal law of setting a cleanup level commensurate with a site’s reasonably foreseeable use.⁹ It may well be

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Commenter No. 168 (cont'd): Christine Rowe

**9th Circuit Court of Appeals – continued from previous slide –
RE: “the state’s authority to impose its subsistence farming
standard as against the less stringent federal industrial,
recreational, and residential standard.”**

THE BOEING COMPANY V. RAPHAEL 11

unreasonable to foresee subsistence farming at the site. The record does not show why this standard was adopted, or whether subsistence farming of this sort was contemplated for the Los Angeles suburbs. The subsistence farming standard is more stringent than the suburban residential standard required by the agreed-upon order governing the cleanup of non-radioactive chemicals. DOE’s cleanup procedures specifically rejected the state law’s standard as “not a reasonable scenario for the site.” Boeing has made a public commitment to dedicate the site for public use as open space parkland, not subsistence farming. But reasonable foreseeability of subsistence farming is not the controlling issue in this case. The relevant tension in this case is the state’s authority to impose its subsistence farming standard as against the less stringent federal industrial, recreational, and residential standard.

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**The WOW Factor –
California does not challenge Boeing’s standing, but
some advocacy groups as amici curiae do.”**

I. Standing

California does not challenge Boeing’s standing, but some advocacy groups as amici curiae do. Their argument is that Boeing suffers no injury in fact from SB 990 because as a federal contractor, it will be paid for its work and bears no other costs. We disagree. The law prohibits Boeing from transferring its own real property, injury enough.¹² Even if the federal government does pay for all the cleanup work, the estimated 50,000 year delay in transferability (based on estimated time for cleanup of groundwater to be completed)

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Commenter No. 168 (cont'd): Christine Rowe

**9th Circuit Court of Appeals – continued from page 12 –
50,000 years to cleanup the Groundwater!**

THE BOEING COMPANY V. RAPHAEL 13

is indeed an injury in fact to Boeing as landowner. Nor has the federal government agreed to cleanup the entire site at its own expense to SB 990's standards. California concedes that Boeing will pay the portion of the cleanup expenses not borne by the federal government. Injury in fact is clear.

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SB 990 IS INVALID – “DOE is a “responsible party” with respect to radioactive contamination.”

168-7
cont'd

Under the Supremacy Clause, “the activities of the Federal Government are free from regulation by any state.”¹³ Accordingly, state laws are invalid if they “regulate[] the United States directly or discriminate[] against the Federal Government or those with whom it deals.”¹⁴ SB 990 is invalid on both grounds.

A. Direct Regulation of the U.S. Government

SB 990 regulates the Department of Energy’s cleanup activities directly. SB 990 authorizes California’s Department of Toxic Substances Control to “use any legal remedies available” under the State’s hazardous waste laws “to compel a responsible party or parties to take or pay for appropriate removal or remedial action necessary to protect the public health and safety and the environment at the Santa Susana Field Laboratory site.”¹⁵ DOE is a “responsible party” with respect to radioactive contamination. All of the contamination at Santa Susana is the result of federal activity

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Commenter No. 168 (cont'd): Christine Rowe

**9TH CIRCUIT COURT OF APPEALS RELATED TO SB
990'S IMPACT ON THE DOE CLEANUP**

The federal Department of Energy has accepted responsibility for the cleanup of radioactive contamination, and it is actively conducting the cleanup through its cleanup contractor, Boeing. SB 990 affects nearly all of DOE's decisions with respect to the cleanup, including the environmental sampling that is required, the cleanup procedures to be used, and the money and time that will be spent. The state law requires an application of more stringent cleanup standards than federal laws and DOE's cleanup procedures do. Whether state law is better or worse does not affect state authority, just whether the state regulates federal activity.

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Commenter No. 168 (cont'd): Christine Rowe

9TH CIRCUIT COURT OF APPEALS – “SB 990 directly interferes with the functions of the federal government.”

SB 990 directly interferes with the functions of the federal government. It mandates the ways in which Boeing renders services that the federal government hired Boeing to perform. The state law replaces the federal cleanup standards that Boeing has to meet to discharge its contractual obligations to DOE with the standards chosen by the state. It overrides federal decisions as to necessary decontamination measures. Unlike the tax cases, SB 990 regulates not only the federal contractor but the effective terms of federal contract itself.

Thus, SB 990 violates intergovernmental immunity unless Congress has clearly and unambiguously authorized California to exercise authority over the Department of Energy with respect to radioactive materials. “It is well settled that the activities of federal installations are shielded by the Supremacy Clause from direct state regulation unless Congress provides ‘clear and unambiguous’ authorization for such regulation.”¹⁹

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Commenter No. 168 (cont'd): Christine Rowe

**9TH CIRCUIT COURT OF APPEALS REGARDING CONGRESSIONAL
AUTHORIZATION AND THE ATOMIC ENERGY ACT**

There is no clear congressional authorization in the Atomic Energy Act that would allow California to regulate DOE's cleanup of radioactive materials at Santa Susana. The agreement entered between California and the Atomic Energy Commission in 1962 does not affect the immunity analysis. The 1962 agreement was made pursuant to the 1959 amendment to the Atomic Energy Act that allowed the Atomic Energy Commission to transfer licensing authority over nuclear materials to states, pursuant to individual agreements with individual states.²⁰ Congress sought, among other things, "to recognize the need, and establish programs for, cooperation between the States and the Commission with respect to control of radiation hazards associated with the use of [nuclear material]."²¹ The Act provides that states "shall have authority to regulate the materials covered by [an] agreement for the protection of the public health and safety from radiation hazards."²² Under the 1962 agreement, California's Department of Public Health has licensed Boeing's *commercial* nuclear work at Santa Susana.

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Commenter No. 168 (cont'd): Christine Rowe

**9TH CIRCUIT COURT OF APPEALS REGARDING
THE STATE'S RCRA AUTHORITY**

The Resource Conservation and Recovery Act ("RCRA")²⁸ does not authorize California to regulate DOE's cleanup of radioactive contamination. RCRA allows states to operate a hazardous waste management plan applicable to federal facilities so long as the state regulates "in the same manner, and to the same extent, as any person is subject to such requirements."²⁹ But RCRA excludes from its coverage radioactive materials regulated under the Atomic Energy Act.³⁰ So RCRA does not apply to the radioactive contamination in this case.

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Commenter No. 168 (cont'd): Christine Rowe

9TH CIRCUIT COURT OF APPEALS RE CERCLA – *“However, the waiver does not apply to the extent a State law would apply any standard or requirement to (federal) facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by (the federal government).”*

THE BOEING COMPANY V. RAPHAEL 19

990. Under CERCLA, states may obtain authority to clean up certain hazardous waste sites by obtaining EPA approval and entering into a “cooperative agreement.”³² Unlike RCRA, some provisions of CERCLA cover nuclear materials. The definition of “release” includes releases of nuclear materials except in certain situations.³³ EPA includes “radionuclides” in the list of “hazardous substances.”³⁴ And CERCLA contains a federal immunity waiver clause with respect to state laws concerning removal and remedial of hazardous substances. However, the waiver does not apply “to the extent a State law would apply any standard or requirement to [federal] facilities which is more stringent than the standards and requirements applicable to facilities which are not owned or operated by [the federal government].”³⁵ SB 990 applies more stringent requirements to Santa Susana than to non-federal facilities because it requires cleanup to a standard suitable for subsistence farming, rather than for the site’s reasonably foreseeable future use. Under the state’s generally applicable process, the future use would be determined by considering a number of site-specific factors such as current use, county general plans, and topography. It is undisputed that the subsistence farming has not been so determined as a land use assumption for the Santa Susana site.

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Commenter No. 168 (cont'd): Christine Rowe

9TH CIRCUIT COURT OF APPEALS – “SB 990 also violates intergovernmental immunity because it discriminates against the federal government and Boeing as a federal contractor.” “California does not dispute that “SB 990 singles out Boeing, DOE, NASA and the (Santa Susana Field Laboratory) site for a substantially more stringent cleanup scheme than that which it applies elsewhere in the State.”

B. Discrimination Against the U.S. Government and Its Contractors

SB 990 also violates intergovernmental immunity because it discriminates against the federal government and Boeing as a federal contractor. “A state or local law discriminates against the federal government if it treats someone else better than it treats the government.”³⁶ California does not dispute that “SB 990 singles out Boeing, DOE, NASA and the [Santa Susana Field Laboratory] site for a substantially more stringent cleanup scheme than that which applies elsewhere in the State.” The fact that Santa Susana is especially contaminated does not render the law non-discriminatory because California’s generally-applicable environmental laws do not impose the SB 990 radioactive cleanup standards at the Santa Susana site.

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Commenter No. 168 (cont'd): Christine Rowe

My Conclusions regarding the AOCs based on the 9th Circuit Court of Appeals Ruling

- 1) The State of California – DTSC has the right to require certain cleanup standards for the SSFL site which they did with the 2007 Consent Order between DTSC and all three Responsible Parties.
- 2) The Department of Energy has committed to the 2007 Consent Order, and has agreed to cleanup the property – Area IV and the Northern Buffer Zone – to a residential standard.
- 3) The Boeing Company owns the land that is contaminated, according to the 9th Circuit Court of Appeals, by federal contracts.
- 4) Due to the 9th Circuit Court of Appeal ruling on SB 990, Boeing will cleanup its portion of the SSFL site to a residential standard, but has stipulated that the end use will be open space / parkland.
- 5) It is my opinion that the AOC's are void because they are directly and inextricably tied to SB 990 which was found to be unconstitutional.
- 6) It is my understanding based on this ruling that the State RCRA laws due not cover radioactive waste. And even CERCLA would not require a cleanup higher than is required by non federal facilities.
- 7) "California does not dispute that "SB 990 singles out Boeing, DOE, NASA and the (Santa Susana Field Laboratory) site for a substantially more stringent cleanup scheme than that which it applies elsewhere in the State."
- 8) In conclusion, it is my opinion, that the DOE and NASA should both be complying with the 2007 Consent Order, and therefore, the need to consider the DOE AOC cleanup alternative would be *potentially illegal and irresponsible* because it does not require a human health risk assessment.

168-8

168-9

168-10

168-11

168-8 At this time, DOE has not made any specific cleanup decisions. DOE has identified its Preferred Alternative(s) in Chapter 2, Section 2.7 of this Final EIS.

DOE's preferred alternative for soils remediation is the Conservation of Natural Resources, Open Space Scenario. DOE's preferred alternative for building demolition is the Building Removal Alternative. Under this alternative DOE would demolish the 18 DOE-owned buildings in Area IV and transport the resulting waste off site for disposal. DOE's preferred alternative for groundwater remediation is a combination of the Monitored Natural Attenuation Alternative and the Treatment Alternative.

The selected clean-up remedies will be identified in the ROD(s). DOE signed the 2007 Consent Order and the 2010 AOC and will follow processes outlined in those documents that lead to cleanup (e.g., preparation a Corrective Measures Study for groundwater and a Soil Remedial Action Implementation Plan for soil).

168-9 Boeing owns approximately 2,400 acres of land at SSFL. This land includes Area IV and the NBZ, the land that DOE addresses in this Final EIS. Boeing's cleanup of its other land at SSFL is outside the scope of this DOE EIS. However, as discussed in Chapter 1, Section 1.5, of this EIS in 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

168-10 DOE acknowledges that SB 990 was found to be unconstitutional. Please refer to the response to comment 168-7. This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities

168-11 This Final EIS evaluates the human health risk of performing remediation under each alternative and the post remediation risk of any contamination left behind under each alternative. Under the Cleanup to AOC LUT Values Alternative, contaminants would be cleaned up to background or minimum detection limits except in exemptions areas. Clean up to background or minimum detection limits would result in no incremental risk and therefore would not require a risk assessment. Cleanup levels in the exemption areas would be protective of human health and the environment. The human health risk of contamination left in these areas is evaluated in this Final EIS.

Commenter No. 168 (cont'd): Christine Rowe

From the DOE DEIS – Alternatives based on risk to workers and to members of the public
I support a Risk based cleanup based on the 2007 Consent Order which is what Boeing will be doing on their portion of the SSFL site.

168-12

168-12

DOE acknowledges your support for a risk-based cleanup based on the 2007 Consent Order (cleaning radionuclides to “background” and chemicals based on risk), or if necessary, cleanup based on the Cleanup to Revised LUT Values Alternative. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

DOE’s assumptions in the EIS about truck traffic in the SSFL vicinity are based on a Transportation Agreement between DOE, NASA, and Boeing that limits the total number of heavy-duty truck loads departing SSFL from DOE, NASA, and Boeing activities to 96 trucks per day (Boeing 2015a). After consideration of budget and operational constraints, DOE has incorporated a more realistic estimate of 16 truck round trips per day on Woolsey Canyon Road for DOE soil removal activities. The impacts of this reduction in truck traffic has been incorporated into the analysis of all three of the soil remediation action alternatives. This change would reduce the daily and annual risks and other environmental impacts, however, it would not reduce the overall risks or impacts determined for an alternative but would only spread them over a longer period of time.

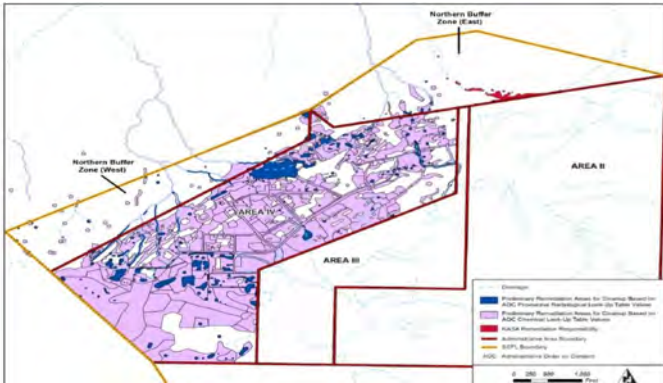
Section 3 – Public Comments and DOE Responses

Resource Area	Alternatives			
	Soil No Action	Cleanup to AOC LUT Values	Cleanup to Revised LUT Values	Conservation of Natural Resources
Human health	<p>Workers</p> <p>Estimated exposures from monitoring and maintenance activities would be prevented from elevated and radionuclide exposure and potential health through respiratory with DOE implemented the worker safety and radiation protection.</p> <p>Valley Area:</p> <p>There would be no change in the risk of exposure to the flight support field from these three alternatives.</p> <p>Members of the public:</p> <p>Hypothetical Outer Suburban Resident - Cause risk and radionuclide exposure from elevated soil in the residential area of the SSFL site comparable to or less than those determined for background soil.</p> <p>Hypothetical Outer Suburban User - Cause risk and radionuclide exposure from elevated soil in the residential area of the SSFL site comparable to or less than those determined for background soil.</p>	<p>Workers</p> <p>Exposure would be higher than those under the No Action Alternative during 10 years of soil remediation. Radionuclide workers would be prevented from elevated and radionuclide exposure through respiratory with DOE implemented the worker safety and radiation protection. Radionuclide protection practices would be employed on that radionuclide sites see ALARA.</p> <p>Valley Area:</p> <p>This proposal the exposure of workers and the public to higher gamma would be reduced to levels that would be similar to the No Action Alternative because of the removal of soil that would be elevated 90,000 pCi/m² (rad).</p> <p>Members of the public:</p> <p>Classified and radionuclide exposed soil exceeding AOC LUT values would be removed. Therefore, risks to a hypothetical outer suburban resident or occasional user would be less than those under the No Action Alternative.</p>	<p>Workers</p> <p>The duration of higher exposures would be 2 years. Workers would have less exposure to radionuclides compared to those under the Cleanup to AOC LUT Values Alternative, exposure to radionuclides would be the same as under the Cleanup to AOC LUT Values Alternative.</p> <p>Valley Area:</p> <p>The potential for exposure of workers and the public to higher gamma would be reduced to levels that would be similar to the No Action Alternative because of the removal of soil that would be elevated 114,500 pCi/m² (rad).</p> <p>Members of the public:</p> <p>Classified and radionuclide exposed soil exceeding risk assessment based values would be removed. Therefore, risks to a hypothetical outer suburban resident or occasional user would be less than those under the No Action Alternative. Less areas than those under the Cleanup to AOC LUT Values or Cleanup to Revised LUT Values Alternative.</p>	<p>Workers</p> <p>The duration of higher exposures would be 2 years. Workers would have less exposure to radionuclides compared to those under the Cleanup to AOC LUT Values Alternative. Radionuclide protection practices would be the same as under the Cleanup to AOC LUT Values Alternative.</p> <p>Valley Area:</p> <p>The potential for exposure of workers and the public to higher gamma would be reduced to levels that would be similar to the No Action Alternative because of the removal of soil that would be elevated 114,500 pCi/m² (rad).</p> <p>Members of the public:</p> <p>Classified and radionuclide exposed soil exceeding risk assessment based values would be removed. Therefore, risks to a hypothetical outer suburban resident or occasional user would be less than those under the No Action Alternative. Less areas than those under the Cleanup to AOC LUT Values or Cleanup to Revised LUT Values Alternative.</p>

Commenter No. 168 (cont'd): Christine Rowe

DOE AREA IV and NBZ cleanup map based on AOC LUT Values – I support the language to NASA from the Federal EPA regarding cleaning up the radionuclides to “Background” and the chemicals based upon risk. The EPA does not emphasize the term “Background or detect” as per the AOC. Therefore, I would support the “Background” for Radionuclides found at the Background site at their highest levels – i.e.. “true local Background” or cleaning up the radionuclides that are naturally occurring on site to Risk based screening levels.

168-12
cont'd

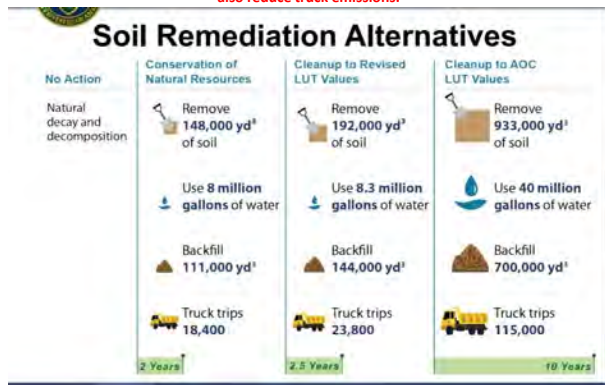


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Commenter No. 168 (cont'd): Christine Rowe

Soil Remediation Alternatives per the DOE EIS – The DOE did not present an alternative which specifically addresses the 2007 Consent Order or the recommendations by the EPA to NASA. Therefore, my recommendations are as above, or if necessary, would be to state that the Cleanup to the Revised LUT Values would be more protective of human health for the future user. However, to protect the residents offsite today, I recommend extending the cleanup time for all three parties by limiting the number of trucks to 50 per day. This would reduce the air particulate matter over the site which has a potential to blow off. It would also reduce truck emissions.

168-12
cont'd



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Commenter No. 168 (cont'd): Christine Rowe

Waste disposal facilities from the DOE DEIS – Why are we removing non hazardous waste? We are taking a local problem and adding to the “Pollution Burden” of other communities, and our trucks will travel through Environmental Justice communities or in some cases – to their end point – in Environmental Justice communities such as Buttonwillow. DTSC should be requiring a cleanup based on risk due to SB 535 requirements.
<http://oehha.maps.arcgis.com/apps/Viewer/index.html?appid=dae2fb1e42674c12a04a2b302a080598>

Table 4-68 Summary of Waste Disposal Capacities

Disposal Facility	Location	Waste Accepted	Available or Projected Waste Capacity	Projected Waste Acceptance Limit
Auriferous Values	Palmdale, CA	Nonhazardous	20.01 million cubic yards as of February 2013.	2,504 tons per day
Chiquita Canyon	Carson, CA	Nonhazardous	96 million cubic yards as of May 2014.	6,500 tons per day
Mosquito *	El Centro, CA	Nonhazardous	600 million tons of projected capacity	30,000 tons per day *
McGrath	McGrath, CA	Nonhazardous	About 2.5 million cubic yards of disposal capacity	4,000 tons per day
Buttonwillow	Buttonwillow, CA	Hazardous *	Projected capacity is greater than 10 million cubic yards	10,500 tons per day
Westwoodland	Westwoodland, CA	Hazardous *	Design capacity is 5 million cubic yards *	442,000 cubic yards per year
US Ecology in Idaho **	Genoa View, ID	Hazardous	1.5 million cubic yards as of May 2014, with 10 million cubic yards permitted; 20 million cubic yards are cited for future expansion	250 daily to annual limit *
EnergySolutions * at Utah	Chee, UT	LLW/MLLW	Current capacity is greater than 8 million cubic yards; additional capacity would be available subject to licensing or permitting	250 daily to annual limit *
NNSS *	Nye County, NV	LLW/MLLW	237,000 cubic yards as of April 2014, up to 1,950,000 cubic yards of projected capacity *	No daily to annual limit *

CA = California; ID = Idaho; LLW = low-level radioactive waste; MLLW = mixed low-level radioactive waste; NVSS = Nevada National Security Site; NV = Nevada; UT = Utah.
 * Waste delivery under both the truck option and truck/and option (see Section 4.3.1).
 † The indicated limit is for combined truck and waste delivery. The truck-only delivery limit is 1,000 tons per day from Imperial County generators and 4,000 tons per day from Los Angeles County generators. The Mosquito Regional Landfill is not currently accepting waste for disposal.
 ‡ The Buttonwillow and Westwoodland Landfills are also evaluated for disposal of nonhazardous soil generated under the soil remediation alternatives.
 § The Westwoodland facility is currently not accepting waste due to low demand in the California market, but could accept waste in the future if market conditions improve.
 ¶ Waste delivery under both the truck option and truck/and option (see Section 4.3.1).
 †† Only waste determined to be only hazardous would be sent to US Ecology in Idaho.
 ††† There are no permitted daily or annual limits on waste acceptance, limitations on waste acceptance would depend on logistical concerns – that is, the availability of sufficient personnel, equipment, and space to receive disposal units to address the quantity of waste to be received.
 †††† The available volume (237,000 cubic yards) is the capacity in currently constructed disposal units. In DOE's December 30, 2014, Record of Decision (79 Federal Register [FR] 76421) for the Final Site-Specific Environmental Impact Statement for the Continued Operation of the Department of Energy National Nuclear Security Administration Nevada National Security Site and Office of Nevada (DOE 2013b), DOE decided to dispose of up to 48 million cubic feet (1.3 million cubic yards) of DOE LLW and 4 million cubic feet (110,000 cubic yards) of DOE MLLW at NNSS. Additional disposal units will be developed at NNSS consistent with the Record of Decision.
 Note: Data derived from Chapter 3, Section 3.10.

168-13

168-13

As described in Chapter 2 of this Final EIS, only the Cleanup to AOC LUT Values Alternative for soil remediation transports significant quantities of what would be termed nonhazardous waste offsite, which is soil with the presence of some contaminants above background, but below any risk-based levels. This alternative incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. In addition, DOE evaluates two action alternatives for soil remediation, the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative, which consider risks to human health and protection of natural resources to determine cleanup levels. The nonhazardous soil would not put any community at risk. All communities along the transportation route would be subject to the impacts from truck traffic, but as indicated in Chapter 4, Section 4.13.1, there would be not disproportionately high impacts to low-income or minority communities.

Conclusions

- It is obvious that DTSC and the DOE cannot achieve the 2017 deadline set out in the 2007 Consent Order.
- DTSC should be renegotiating the 2007 Consent Order based on risks to the community offsite from the cleanup, based on the use of water, based on the need for clean engines for trucks – 2019 or later models, based on the risk of too many trucks traveling up and down Woolsey Canyon Road at the same time.
- DTSC should be working with all three parties and the other applicable agencies such as the CHP and the DOT regarding the best route to ship the radioactive waste which should go to the Nevada test site.
- No radioactive waste should go on trains per discussion in the DOE DEIS Transportation Chapter.
- All waste should go to the closest landfills possible to reduce emissions and the risk of truck accidents.
- And DTSC must consider the land fill capacities and therefore the risks to those communities from taking waste related to this site and other State mandated cleanups.

168-14

168-15

168-16

168-17

168-18

168-14 Thank you for your comment. Renegotiating the 2007 Consent Order is outside the scope of this Final EIS. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

168-15 Radioactively contaminated waste would be disposed of at a commercial site or the Nevada National Security Site (formerly, the Nevada Test Site) in Nevada. Regardless of the disposal site, the selected routes would be those approved by DOT for hazardous material shipments. DOE would comply with all permitting and notification requirements for transport of radioactive waste and would coordinate with other involved parties as appropriate.

168-16 Transport of radioactive waste by rail is a reasonable option considered in this Final EIS. Use of rail for transport of radioactive waste would depend on a number of factors, including the capabilities of the receiving facility. Because SSFL does not have a direct rail connection, another factor would be the distance to and availability of an intermodal facility with appropriate features. The intermodal facility should have the infrastructure and security for the extended trans-loading of wastes from trucks to railcars. The use of a representative intermodal facility about 50 miles from SSFL was analyzed in this EIS.

168-17 This Final EIS evaluates multiple potential disposal locations for transportation risk assessment purposes. This evaluation provides flexibility in the selection of future disposal locations that are within the ranges evaluated in the EIS. A number of factors will be considered in selecting disposal locations, including environmental impacts, cost, and disposal facility capacity.

168-18 This Final EIS evaluates the potential impacts from transporting each type of waste under each alternative and combination of action alternatives to multiple representative disposal facilities. Included is an evaluation of the impacts of transporting nonhazardous waste (the waste to be generated in the largest volumes for all soil remediation alternatives) to four different nonhazardous waste disposal facilities. For wastes generated by DOE at Area IV of SSFL, Chapter 4, Section 4.10, of this EIS evaluates the impacts on the disposal capacities of each evaluated facility for all EIS alternatives and all combinations of action alternatives. Other EIS sections evaluate other impacts due to waste shipments, including shipments to landfills. For example, Section 4.6 addresses air emissions of pollutants during waste transport, Section 4.8 evaluates the radiological and non-radiological risks from transporting the wastes to the disposal facilities, and Sections 4.12, 4.13, and 4.14 evaluate, respectively, potential

Commenter No. 168 (cont'd): Christine Rowe

socioeconomic impacts, environmental justice impacts, and impacts to sensitive-aged individuals in the vicinities of the disposal facilities. Chapter 5, "Cumulative Impacts," of this EIS includes an analysis of the potential impacts on disposal facility capacities from all wastes generated at SSFL by DOE, NASA, and Boeing.

For purpose of analysis, DOE assumed that all of each type of waste would be shipped to a single disposal facility authorized for that type of waste; in no case did the waste projected for generation from SSFL exceed the capacity of any of the evaluated disposal facilities. In one case and assuming the Cleanup to AOC LUT Values Alternative, the projected waste represented 33 percent of the facility capacity, and the next highest impact on capacity at another facility was less than 6 percent. Nonetheless, DOE recognizes that any disposal facility may receive wastes from multiple sources, including waste from State-mandated remediation efforts. This Final EIS notes that potential impacts on capacity at a given disposal facility may be alleviated by use of multiple disposal facilities (see Chapter 4, Section 4.10.4). Similarly, potential impacts from increased local traffic at a disposal facility, may be alleviated by transporting wastes to multiple disposal facilities, by using multiple routes (as available) for delivery to individual facilities, or by using a combination of truck and rail transport if the disposal facility is rail-accessible (see Chapter 4, Section 4.10.4). The EIS also notes in Chapter 7, Section 7.3, that up to 718,000 cubic yards of nonradiological, nonhazardous waste would be generated by DOE activities with chemical concentrations below risk-based levels (but above AOC LUT values under the Cleanup to AOC LUT Values Alternative). Disposal of this waste in regulated waste landfills would use disposal capacity that could otherwise accept waste with larger levels of chemical contamination.

Commenter No. 169: Christine Rowe

From: Christine Rowe
To: [Jennings, Stephanie](#)
Cc: [Jones, John](#); [Kramer, Debbie](#); [Wondollock, John](#)
Subject: DOE DEIS Comments from Christine L. Rowe - Power Point 2
Date: Friday, April 14, 2017 2:45:56 AM
Attachments: [DOE SSEL DOE DEIS Comments Power Point 2 Christine L. Rowe April 13 2017.pptx](#)
[DOE SSEL DOE DEIS Comments Power Point 2 Christine L. Rowe April 13 2017.pdf](#)

Dear Ms. Jennings,

Attached is my second power point for my comments on the DOE Draft Environmental Impact Statement.

Due to the time, I am submitting what I can to meet your deadline.

Respectfully submitted,

Christine L. Rowe

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Commenter No. 169 (cont'd): Christine Rowe

**DEPARTMENT OF ENERGY SANTA
SUSANA FIELD LABORATORY DRAFT
ENVIRONMENTAL IMPACT
STATEMENT
APRIL 13, 2017**

**POWER POINT TWO
COMMENTS by
CHRISTINE L. ROWE
B.S. in Health Education - CSUN**

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PURPOSE AND NEED

- 1) The purpose and need of this Power Point is to address potential impacts to the residents surrounding the Santa Susana Field Laboratory site based upon potential airborne contaminants that could be released due to excavation and with backfill.
- 2) A second purpose is to address the potential effects of the trucks trips to the proposed landfill locations based on Tables and other references in the Department of Energy's Draft Environmental Impact Statement (DOE DEIS).
- 3) The third purpose of this presentation is to show the existing "Pollution Burden" at the Santa Susana Field Laboratory (SSFL) site, in the surrounding communities, and along the truck routes to the landfills, and at the landfill locations that are referenced in the DEIS.
- 4) The fourth purpose is to show other potential causes of illness in my community based on my research using a tool from the California Office of Environmental Health Hazard Assessment (OEHHA), an agency that I believe that the DOE should have noticed, but I do not believe that the DOE did so based on Chapter 14 of the DEIS.

169-1

169-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

169-2

169-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

169-3

169-3 Thank you for your comment. It has been included in the Administrative Record for the EIS. Regarding distribution of the Draft EIS, DOE provided copies to the State of California clearinghouse who distributed it to the appropriate State agencies. Also as shown in Chapter 14 of the DEIS, the DEIS was distributed to Cal EPA and the California Office of Environmental Health Hazard Assessment (OEHHA) is a department of that agency. As shown in Chapter 14 of the DEIS, the DEIS also was distributed to the DTSC, a sister agency of OEHHA.

Commenter No. 169 (cont'd): Christine Rowe

Preliminary Estimated Soil Volumes for Transportation

Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Table S-3 Preliminary Estimated Soil Volumes for Transportation

Soil Category	Soil Chemical / Radionuclide Classifications	Soil Volumes (cubic yards)
1	Chemicals above AOC LUT values, but below risk-based levels and hazardous waste standards; Radionuclides at or below AOC LUT values	44,000
2	Chemicals above risk-based levels, but below hazardous waste standards; Radionuclides at or below AOC LUT values	52,000
3	Chemicals above hazardous waste standards; Radionuclides at or below AOC LUT values*	49,000
4	Chemicals above AOC LUT values, but below risk-based levels and hazardous waste standards; Radionuclides above AOC LUT values, but below risk-based levels	44,000
5	Chemicals above risk-based levels that may be a hazardous waste; Radionuclides above AOC LUT values*	44,000
6	Chemicals at or below AOC LUT values; Radionuclides above risk-based levels	3,000
Total		933,000

AOC = Administrative Order as Cited for Remedial Action; LUT = Look Up Table
 * A total of 93,000 cubic yards of soil, with and without radionuclides, is estimated to exceed chemical hazardous waste standards.
 † Note: The total does not equal the sum of the individual sources due to rounding.

In accordance with the 2010 AOC, following soil removal, cleanup would be verified by DTSC for chemicals and EPA for radionuclides before backfilling of the excavated areas would start. The verification process would involve collection of confirmatory samples following soil removal, analysis of the samples for constituents of concern, and transmission of the data to the agencies for their review. This verification process could take up to 6 weeks following soil removal.

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Air Quality Impacts under the Soil Remediation Alternatives

4.6.1 Soil Remediation Alternatives

Impacts under the soil remediation alternatives are summarized and compared in Table 4-30.

Table 4-30 Air Quality Impacts under the Soil Remediation Alternatives

Resource	Soil No Action Alternative	Soil Remediation Action Alternatives		
		Cleanup to AOC/LUT Values	Cleanup to Revised LUT Values	Conservation of Natural Resources
Air quality	No additional emissions compared to existing conditions	Emissions of pollutants such as VOCs, CO, NOx, SO ₂ , and particulate from onsite activities. Nearly all particulate emissions arise from fugitive dust. Additional emissions would occur from on-road vehicles, including those for transporting waste and backfill.	Emissions of the same types of pollutants as those under the Cleanup to AOC/LUT Values Alternative, but in smaller total quantities.	Emissions of the same types of pollutants as those under the Cleanup to Revised LUT Values Alternative, but in smaller total quantities.
Greenhouse gases	No additional emissions compared to existing conditions	A total of 25,000 to 84,000 metric tons of CO ₂ would be emitted, primarily from vehicles.*	A total of 12,000 to 33,000 metric tons of CO ₂ would be emitted, primarily from vehicles.*	A total of 7,700 to 24,000 metric tons of CO ₂ would be emitted, primarily from vehicles.*

AOC = Administrator Order as Consent for Remedial Action, CO = carbon monoxide, CO₂ = carbon dioxide, LUT = Look-Up Table, NOx = nitrogen oxides, SO₂ = sulfur dioxide, VOC = volatile organic compound

* The range in CO₂ emissions reflects differences in emissions under the nearby and distant disposal site scenarios.

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Commenter No. 169 (cont'd): Christine Rowe

Summary of Waste Disposal Capacities

Table 4-45 Summary of Waste Disposal Capacities

Disposal Facility	Location	Waste Accepted	Available or Projected Waste Capacity	Projected Waste Acceptance Limit
Amigo Valley	Petaluma, CA	Non-hazardous	230 million cubic yards as of February 2013	1,544 tons per day
Chaparral Central	Contra Costa, CA	Non-hazardous	90 million cubic yards as of May 2014	4,500 tons per day
Marques	El Cerrito, CA	Non-hazardous	400 million tons of projected capacity	20,000 tons per day ^a
MLC/Cons	San Rafael, CA	Non-hazardous	allows 1.5 million cubic yards of disposal capacity	4,000 tons per day
Primm/Holmes	Primm/Holmes, CA	Hazardous	Projected capacity is greater than 10 million cubic yards	10,000 tons per day
Whittowood	Whittowood, CA	Hazardous	Design capacity is 1 million cubic yards ^b	940,000 cubic yards per year
US Ecology in Maine ^c	Greenfield, VT	Hazardous	1.3 million cubic yards as of May 2014 with 10 million cubic yards projected. 20 million cubic yards are under the final agreement.	No daily or annual limit ^d
EnergySolutions in Utah	Clive, UT	LLW/MILW	Contract capacity is greater than 8 million cubic yards, additional capacity would be available subject to pricing to permitting.	No daily or annual limit ^e
NNSS ^f	Stow, Nevada, NV	LLW/MILW	23,000 cubic yards as of April 2014, up to 1,000,000 cubic yards of projected capacity ^g	No daily or annual limit ^h

CA = California; ID = Idaho; LLW = low-level radioactive waste; MILW = mixed low-level radioactive waste; NNSS = Nevada National Security Site; NV = Nevada; UT = Utah

^a Waste delivery rates for mixed and special waste only (see Section 4.8.1).

^b The authorized limit is the maximum level and not waste delivery. The truck-rail delivery limit is 1,000 tons per day from Ingersoll. Current processing and 4,000 tons per day from Los Angeles County operations. The MLC/Cons Regional Landfill is not treating accepting waste for disposal.

^c The Brentwood and Whittowood Landfills are also evaluated for disposal of non-hazardous soil generated under the soil installation alternatives.

^d The Whittowood facility is presently not accepting waste due to low demand in the California market, but could accept waste in the future if market conditions improve.

^e Waste delivery under both the mixed and special waste options (see Section 4.8.1).

^f Only waste determined to be safe for transport would be sent to US Ecology in Idaho.

^g There are no projected daily or annual limits in waste acceptance. Submitted low waste acceptance would depend on logistical concerns – that is, the availability of sufficient processing, equipment, and space to move disposal units to within the quantity of waste to be accepted.

^h The annual volume (237,000 cubic yards) is the capacity in transfer containers for disposal units. In DOE's December 16, 2014 Report of Progress ("90 Percent Report" [90] 1641) for the Final Site Environmental Impact Statement for the Ground Disposal of the Department of Energy's "Special Nuclear Waste" (Special Nuclear Waste) (Final EIS) (EIS-04-010) (EIS-04-010) (DOE-01-10), DOE described its disposal of up to 48 million cubic feet (1.5 million cubic yards) of DOE LLW and 4 million cubic feet (100,000 cubic yards) of DOE MILW at NNSS. Additional disposal units will be developed at NNSS consistent with the Record of Decision.

Note: Data derived from Chapter 3, Section 3.10.

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Summary of Total Emissions under the Action Alternatives

Table 4-31 Summary of Total Emissions under the Action Alternatives

Activity/Source	Emissions (tons)						
	VOC	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO ₂ (MT)
Cleanup to AOC LUT Values Alternative							
Off-road Equipment	3.2	21	27	0.04	1.4	1.27	3,300
On-road Vehicles – Nearby Disposal Site	3.3	14	100	0.26	2.4	1.26	25,000
On-road Vehicles – Distant Disposal Site	9.3	36	330	0.85	8.0	4.6	81,000
Fugitive Dust					250	45	
Total – Nearby Disposal Site	6.5	35	130	0.30	260	48	28,000
Total – Distant Disposal Site	12	56	360	0.89	260	51	84,000
Cleanup to Revised LUT Values Alternative							
Off-road Equipment	0.72	4.7	6.1	0.01	0.31	0.28	770
On-road Vehicles – Nearby Disposal Site	1.3	5.2	43	0.12	1.1	0.63	11,000
On-road Vehicles – Distant Disposal Site	3.6	13	130	0.34	3.2	1.9	32,000
Fugitive Dust					38	8.6	
Total – Nearby Disposal Site	2.0	9.9	51	0.12	3.9	9.5	12,000
Total – Distant Disposal Site	4.3	18	140	0.35	4.1	11	33,000
Conservation of Natural Resources Alternative							
Off-road Equipment	0.54	3.5	4.5	0.01	0.23	0.21	560
On-road Vehicles – Nearby Disposal Site	0.86	3.5	29	0.08	0.69	0.40	7,100
On-road Vehicles – Distant Disposal Site	2.6	10	97	0.25	2.4	1.4	24,000
Fugitive Dust					31	7.2	
Total – Nearby Disposal Site	1.4	7.0	34	0.08	3.2	7.8	7,700
Total – Distant Disposal Site	3.2	13	100	0.26	3.4	8.8	24,000
Building Removal Alternative							
Off-road Equipment	0.17	1.00	1.7	a	0.08	0.08	200

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Commenter No. 169 (cont'd): Christine Rowe

This page from Chapter 4 page 89 states that: "Under the nearby disposal site scenario, nitrogen oxides emissions would be smaller than the most restrictive indicator threshold (10 tons per year) under the combination of the Cleanup to AOC LUT Values, Building Removal, and Groundwater Treatment Alternatives (2.7 tons per year), but larger than this threshold under the combination of the Cleanup to Revised LUT Values, Building Removal, and Groundwater Treatment Alternatives (12 tons per year)." It is my opinion that this is because the 1st Alternative is extended over 10 years v 2.5 years for the second alternative. This justifies reducing the truck frequency to 50 per day for all three parties in my opinion to a five year cleanup for Alternative 2.

169-4

Chapter 4 – Environmental Consequences

Except for nitrogen oxides, none of the evaluated pollutants would exceed the indicator emission thresholds in any of the evaluated domains outside Ventura County and the South Coast Air Basin under either the nearby or distant disposal site scenario. As shown in Table 4-38, the indicator emission thresholds assumed for these domains range from 10 to 250 tons per year. Under the nearby disposal site scenario, nitrogen oxides emissions would be smaller than the most restrictive indicator emission threshold (10 tons per year) under the combination of the Cleanup to AOC LUT Values, Building Removal, and Groundwater Treatment Alternatives (2.7 tons per year), but larger than this threshold under the combination of the Cleanup to Revised LUT Values, Building Removal, and Groundwater Treatment Alternatives (12 tons per year). Under the distant disposal site scenario, nitrogen oxides emissions would be smaller than the most restrictive indicator emission threshold (25 tons per year) under the combination of the Cleanup to AOC LUT Values, Building Removal, and Groundwater Treatment Alternatives (14 tons per year), but larger than this threshold under the combination of the Cleanup to Revised LUT Values, Building Removal, and Groundwater Treatment Alternatives (51 tons per year).

To define the worst case indicator emission thresholds for the regions outside of Ventura County and the South Coast Air Basin, the most degraded air quality conditions were assumed for any area where trucks would travel between SSFL and offsite disposal facilities. Hence, the worst-case air quality conditions for the domains traversed by trucks to nearby (Batonwillow Landfill) and distant (EnergySolutions in Utah or US Ecology in Idaho) disposal sites occur within the San Joaquin Valley Air Basin and the Mojave Desert Air Basin. The worst-case indicator emission thresholds for nitrogen oxides in these two air basins are 10 and 25 tons per year, respectively. As identified above, under two of the three combinations of action alternatives, peak annual emissions generated by all truck travel between SSFL and either the nearby or distant disposal site location would exceed these worst-case nitrogen oxides emission thresholds. However, haul truck outages occur solely within the San Joaquin Valley Air Basin and Mojave Desert Air Basin would cause emissions that would remain below their applicable nitrogen oxides emission thresholds. Haul truck outages occur within all other air basins also would cause emissions that would remain below their applicable nitrogen oxides emission thresholds (100 or 250 tons per year).

169-4 The comment refers to the Draft EIS air quality analyses performed for the domain outside of Ventura County and the South Coast Air Basin. The differences in peak annual emissions between each cleanup scenario within this analysis domain are not due to averaging the total emissions for each scenario by the number of years needed to complete each scenario, but instead are due to the annual miles travelled by haul trucks under each scenario. For example, during the peak year of activities, all three Alternatives proposed excavating and transporting the same volumes of soils. The Cleanup to Revised LUT Values and Conservation of Natural Resources Alternatives proposed excavation of about 5 times the volume of soils in categories 4-6 versus the AOC LUT Values Alternative during the peak year. Seventy-nine percent of the soils excavated under the Cleanup to AOC LUT Values Alternative would have been categories 1-2 soils. Within the domain beyond Ventura County and the South Coast Air Basin, the round trip distance travelled by a haul truck to a proposed nearby disposal facility is 460 miles for soils in categories 4-6 versus 0 miles for soils in categories 1 and 2. Therefore, under the Draft EIS scenarios, the Cleanup to Revised LUT Values and Conservation of Natural Resources Alternatives would have produced greater peak annual miles travelled by haul trucks and corresponding higher air emissions within this domain compared to the Cleanup to AOC LUT Values Alternative.

Due to the revisions to the descriptions of soil remediation alternatives in the Final EIS, both the Cleanup to AOC LUT Values and Revised Cleanup to LUT Values Alternatives would remove the same amounts of soils in a peak year and therefore would generate equal amounts of emissions during this period. Chapter 4, Section 4.6.1 of this Final EIS is revised to explain how annual emissions generated by the soil remediation alternatives are dependent on the types of remediated soils and the associated disposal locations for these soils. In the Final SSFL Area IV EIS air emissions calculation document (Leidos 2018b), Table 1.A-12 (Total On-Road Vehicle Activity Data for Soil Remediation Cleanup to AOC LUT Values - SSFL Area IV EIS) also presents the round trip distances travelled by haul trucks between the SSFL and proposed disposal facilities for each soil category and analysis domain.

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Contact CalEnviroScreen

What is CalEnviroScreen?

- CalEnviroScreen is a mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects.
- CalEnviroScreen uses environmental, health, and socioeconomic information to produce scores for every census tract in the state.
- The scores are mapped so that different communities can be compared. An area with a high score is one that experiences a much higher pollution burden than areas with low scores.
- CalEnviroScreen ranks communities based on data that are available from state and federal government sources.

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Commenter No. 169 (cont'd): Christine Rowe

**What are cumulative impacts?
What is Environmental Justice?**

What are cumulative impacts?

- "Cumulative impacts" means exposures and public health or environmental effects from all sources of pollution in a geographic area.
- Cumulative impacts also take into account groups of people that are especially sensitive to pollution's effects, such as young children and people with asthma, and socioeconomic factors, such as poverty, race and ethnicity, and education.
- For CalEPA's definition of cumulative impacts, see the CalEnviroScreen 3.0 report.

What is Environmental Justice?

- State law defines environmental justice to mean "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation and enforcement of environmental laws, regulations, and policies."
- Environmental justice principles are an important part of CalEPA's goal to restore, protect and improve the environment, and to ensure the health of people, the environment and the economy.
- CalEPA asked OEHHA to develop CalEnviroScreen to identify communities suffering from cumulative impacts of multiple pollutants and people who are vulnerable to pollution's effects.
- Visit CalEPA's Environmental Justice Program page here: [http://www.cal EPA.gov/EnvironmentalJustice](#)

169-5

169-5

As described in Chapter 5, Section 5.1, of this EIS, the "Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (40 CFR Parts 1500-1508) states: "Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative human health impacts for a post-remediation onsite resident or recreational user from DOE, NASA, and Boeing remediation activities were addressed in Chapter 5, Section 5.5.9 of the Draft EIS. Cumulative human health impacts for the offsite public were added to Section 5.5.9 of this Final EIS. Human health impacts consider exposure to sensitive receptors. Cumulative environmental justice impacts are evaluated in Section 5.5.13. Cumulative impacts on sensitive-aged populations are evaluated in Section 5.5.14.

169-6

169-6

Environmental Justice is similarly defined in Chapter 5, Section 5.5.13, of this EIS. Cumulative environmental justice impacts are evaluated in Section 5.5.13. Cumulative impacts on sensitive-aged populations are evaluated in Section 5.5.14.

Environmental Justice

- It is my opinion in the DOE DEIS, the DOE is taking the position that there are no Environmental Justice impacts because the proposed truck routes go through various routes, through the communities of various socioeconomic status, etc., and therefore, this cleanup by the DOE did not have to address Environmental Justice issues.
- Due to the length of the document, and due to its organization, there was no way for me to search the document in its entirety – over 1500 pages. If Environmental Justice issues were addressed, I apologize.
- That being said, the following slides will address the complex issues – the environmental impacts in the communities surrounding the SSFL site, on the truck routes, and at the end destination areas for some of the landfills in California.

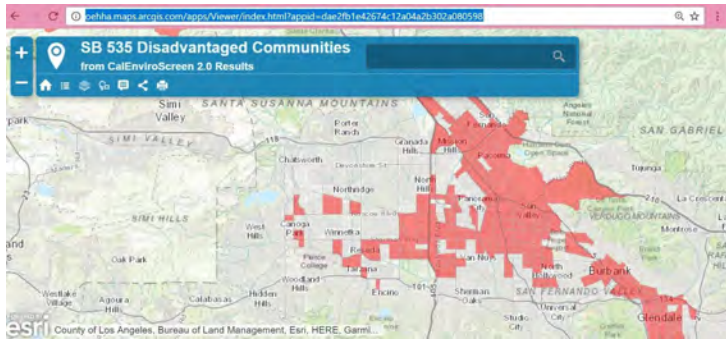
169-7

169-7

Environmental justice issues arise from decisions that disproportionately impact a minority/low income community over another one. In Section 4.13 of the EIS, DOE did evaluate environmental justice impacts in the SSFL vicinity (human health and traffic) and in the vicinities of the evaluated disposal and recycle facilities (traffic). No disproportionately high and adverse impacts were identified in the SSFL region and the regions of the disposal or recycle facilities. It was noted, however, for traffic impacts in the SSFL vicinity that traffic volumes on the evaluated roads, other than Woolsey Canyon Road, could be reduced by using multiple routes to major highway systems. For traffic impacts in the vicinities of the disposal or recycle facilities, impacts at any single facility could be reduced if multiple facilities were used, if multiple routes (as available) were used in the vicinities of individual facilities, or if wastes were shipped to one or more rail-accessible facilities.

Commenter No. 169 (cont'd): Christine Rowe

This map shows the California SB 535 Disadvantaged Communities in the West San Fernando Valley including the Canoga Park Area – which is part of your proposed haul route.



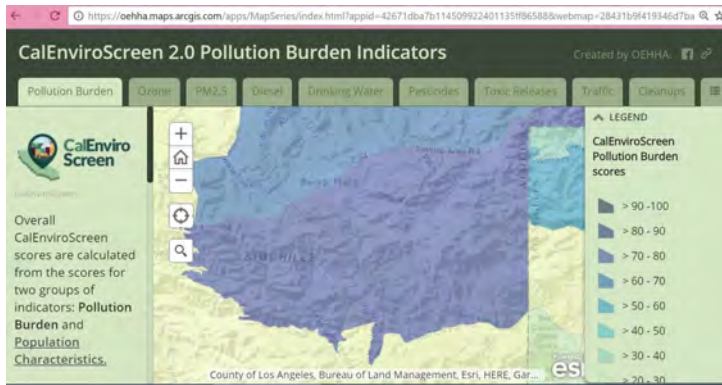
169-8

169-8

DOE compared the information on the map provided in the comment with that in Chapter 3, Section 3.13, of this EIS. The map shows one census tract identified as an SB 535 Disadvantaged Community that abuts one of the proposed transportation routes. As indicated on both the Draft and Final EIS Table 3-43 (census tract 1343.05), this community was identified as a minority community.

Commenter No. 169 (cont'd): Christine Rowe

This map shows the majority of the SSFL site in one census tract to the south – its total pollution burden is high.



169-9

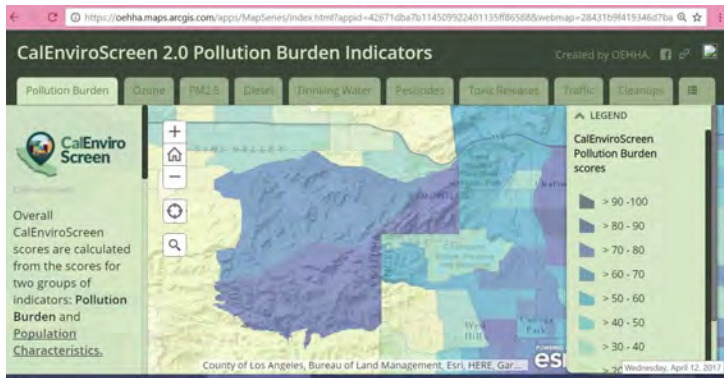
169-9

The CalEnviroScreen website is not maintained or endorsed by DOE. The completion of remediation of SSFL Area IV and the NBZ by DOE, and remediation of other portions of SSFL by NASA and Boeing, should serve to lower the pollution burden score for the census tracts that include SSFL.

Commenter No. 169 (cont'd): Christine Rowe

This screen shot shows the total pollution burden scores surrounding the SSFL site.

|| 169-9
cont'd

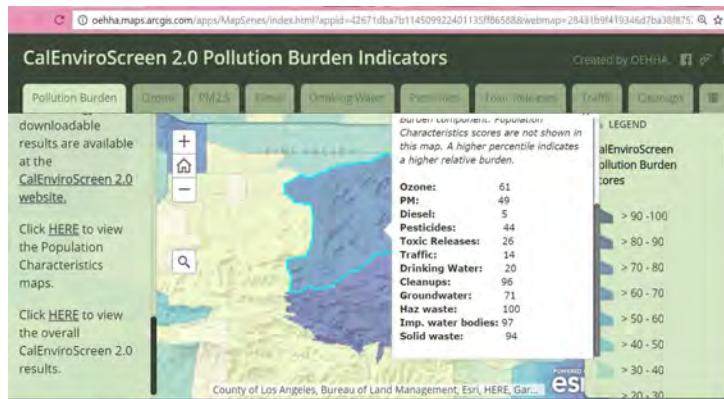


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Commenter No. 169 (cont'd): Christine Rowe

This screen shot shows the various criteria for the census tract to the north. This census tract contains part of AREA IV (shown as Boeing SSFL), part of the NASA property, and on later maps, it indicates that the Air Force Plant 64 was a part of this census tract.

169-9
cont'd

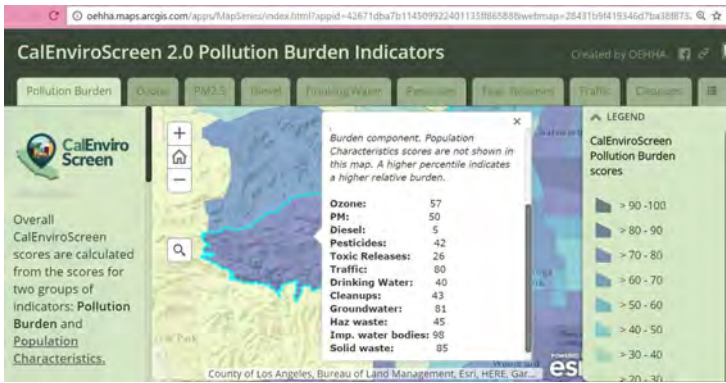


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Commenter No. 169 (cont'd): Christine Rowe

This screen shot shows the pollution burden for the majority of the SSFL site and much of Bell Canyon. This tract also goes off to the northeast of the SSFL site.

169-9
cont'd

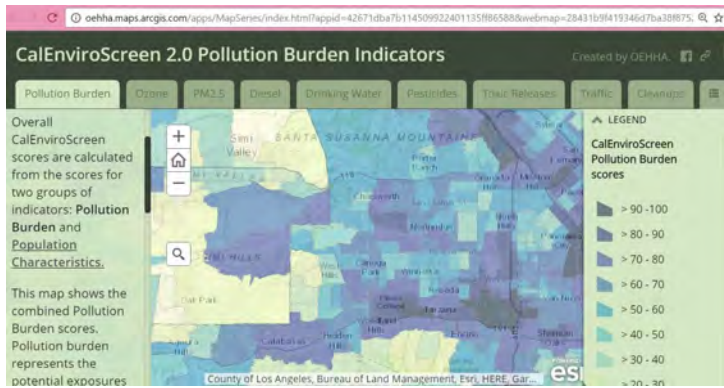


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Commenter No. 169 (cont'd): Christine Rowe

This screen shot shows the total pollution burden of much of the San Fernando Valley relative to the SSFL site.

169-9
cont'd

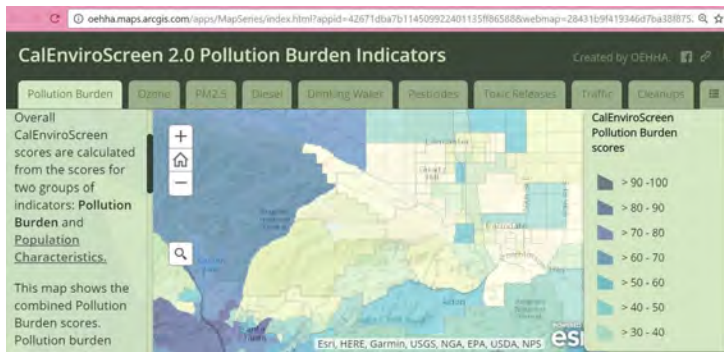


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Commenter No. 169 (cont'd): Christine Rowe

Pollution Burden showing the Antelope Valley – one of the proposed landfill destinations

169-9
cont'd



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Commenter No. 169 (cont'd): Christine Rowe

Pollution Burden Buttonwillow, CA – one of the proposed destinations for a landfill – a Pollution Burden Score of 92 out of 100

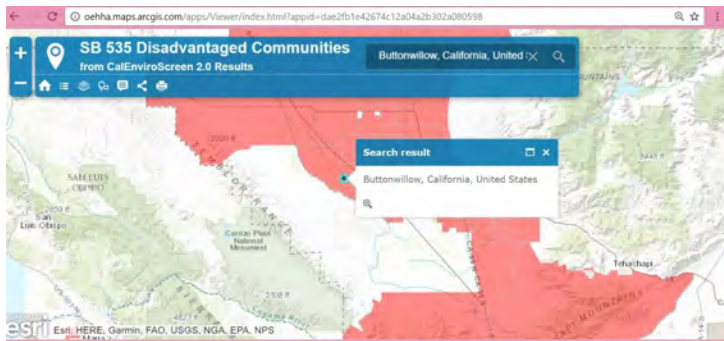
169-9
cont'd



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Commenter No. 169 (cont'd): Christine Rowe

Buttonwillow, CA is a SB 535 Disadvantaged Community – therefore, DTSC must, in my opinion, minimize the waste that is sent to this landfill which is, I believe, is the closest landfill to take hazardous waste.



169-10

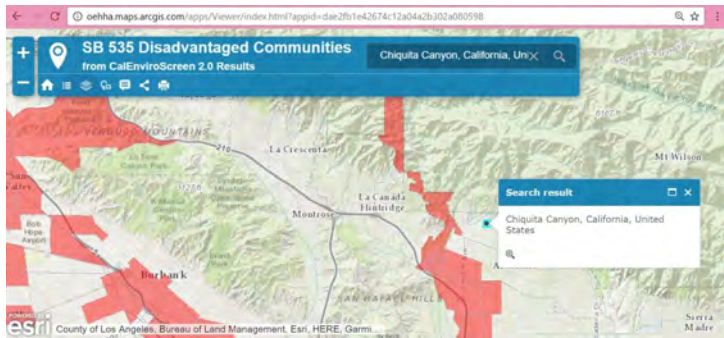
169-10

As discussed in the response to comment 169-6, no disproportionately high and adverse impacts were identified for any minority or low-income community at any of the representative facilities evaluated for receipt of waste from SSFL. The environmental justice analysis in Chapter 4, Section 4.13 of this Final EIS considered the potential impacts at both the Chiquita Canyon and Buttonwillow Landfills. Section 4.13 (e.g., Sections 4.13.1.2 and 4.13.4.2) also point out that the number of truck deliveries to any single facility (and thus the potential for impacts on any community in the vicinity of a facility) could be reduced if multiple facilities were used, if multiple routes (as available) were used in the vicinities of individual facilities, or if waste were shipped to one or more rail-accessible facilities. No decision has been made as to the actual facilities DOE would use for disposal of soils. DOE will consider potential community impacts in that decision.

Commenter No. 169 (cont'd): Christine Rowe

Another landfill – Chiquita Canyon, CA – Close to an SB 535 Disadvantaged Communities location

169-10
cont'd



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Commenter No. 169 (cont'd): Christine Rowe

What are the points that I am trying to make with this presentation?

- 1) Due to time constraints – I have to submit this by midnight today – I will have to send a second half of this presentation after midnight which may not be accepted as on time.
- 2) My point, is that we must consider the fact that we live in a highly contaminated environment both in terms of air quality and water quality.
- 3) The cleanup plans for the SSFL site must be based on the risk of the potential migration of toxic contaminants to the groundwater, to the surface water, and to the air – our pathways of exposure.

169-11

169-11 Cumulative impacts from DOE, NASA, and Boeing remediation activities and from other past, present, and future activities in the Region of Influence, are evaluated in Chapter 5 of this Final EIS. As stated in Chapter 1, Section 1.1 of this EIS, all DOE’s action alternatives would clean up the environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. Therefore, completion of remediation activities at SSFL would result in a less contaminated local environment.

169-12

169-12 Please see the response to comment 169-11, and please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

**DTSC MUST REQUIRE A RISK BASED CLEANUP FOR ALL
THREE RESPONSIBLE PARTIES**

- 1) DTSC has already been through litigation in relation to SB 990.
- 2) The DOE has already been through litigation because they did an Environmental Assessment instead of an Environmental Impact Statement
- 3) DTSC and CDPH are currently being sued for actions relative to landfills – was something sent to a landfill that did not meet its acceptance criteria?
- 4) And DTSC and CDPH are also being sued because DTSC is accused of releasing Boeing's buildings for demolition which falls under Ventura County's domain.
- 5) I believe there is also litigation because DTSC extended the size of the Kettleman landfill? Therefore, DTSC must be sensitive to the amount of waste that is sent to these landfills.
- 6) DTSC must be aware of SB 535 – Disadvantaged Communities – and the potential impacts of sending large volumes of waste to these locations.

169-13

169-13

Thank you for your comment. Renegotiating the 2007 Consent Order is outside the scope of this EIS. DTSC's policies and actions are not under DOE's control. Because the comment/statement is not on the scope or content of the Draft EIS, no response is provided. It has been included in the Administrative Record for the EIS.

In Conclusion

- **DTSC must renegotiate all of the contracts to the 2007 Consent Order with considerations of the current air quality surrounding the SSFL site, the proposed truck routes, water needs, energy to remediate, Environmental Justice Communities, and all other applicable laws including SB 535.**
- **DTSC should support the reduced truck numbers to 50 per day to reduce emissions and the potential for accidents along Woolsey Canyon Road and other traffic routes.**

169-13
cont'd

169-14

169-14 Thank you for your comments regarding proposed changes for local traffic. They have been included in the Administrative Record for the EIS.

As discussed in Chapter 2, for the Final EIS DOE revised the EIS analysis to reflect a more realistic average of 16 heavy-duty truck round trips per day for soil removal activities, although on some days the number of daily truck shipments could increase to 32. This revision extended the projected time for completion of the soil remediation alternative involving the most heavy-duty truck shipments, the Cleanup to AOC LUT Values Alternative, from the 10 years evaluated in the draft EIS to the 26 years evaluated in the Final EIS. DOE evaluated transport of waste from SSFL down Woolsey Canyon Road, then via multiple local roadways to local freeways. Shipments would occur during daylight hours. The EIS evaluates the potential impacts that could occur during shipment of waste and materials, including those from potential accidents, and found these potential impacts to be very small (also see the response to comment 162-6).

Considering all remediation activities at Area IV and the NBZ (i.e., soil remediation, building removal, and groundwater remediation), daily shipments attributable to DOE remediation activities would not exceed 32 and generally would be considerably less. However, NASA and Boeing could also be making shipments of waste, backfill, and equipment during some of the same years that DOE would be making shipments of waste, backfill, and equipment. As discussed in Chapter 2, Section 2.4.4, of this Final EIS, DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of trucks allowed on Woolsey Canyon Road to no more than 96. The potential cumulative impacts of site remediation by DOE, NASA, and Boeing are evaluated in Chapter 5 of the EIS, including the risks associated with transport of waste and material and the potential impacts on traffic in the SSFL area. DOE expects that daily heavy-duty truck shipments potentially as high as 96 per day from DOE, NASA, and Boeing would only occur for a few years. Note that if the total number of cumulative shipments was reduced from an average of 96 per day to 50 per day, it would reduce the annual emissions of airborne pollutants by the three parties as well as other environmental impacts such as annual water use, but it would not reduce the overall risks or impacts attributable to the projected cumulative operations but would spread them over a longer period of time.

Commenter No. 170: Marissa Christiansen,
Friends of the Los Angeles River



570 W. AVE 26 #250
LOS ANGELES
CA 90065
323.223.0585
CONTACT@FOLAR.ORG

April 13th, 2017

U.S. Department of Energy
4100 Guardian St, Suite 160
Simi Valley, CA 93063

Re: *Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory*

Dear U.S. Department of Energy Representatives,

On behalf of Friends of the Los Angeles River (FoLAR), and the 40,000 supporters we represent across the Greater Los Angeles Region, I write in strong support of the City of Los Angeles position regarding the Draft Environmental Impact Statement for the cleanup of the Santa Susana Field Lab. Specifically, we support the position that:

1. The Environmental Impact Statement should be based on remediation of the Department of Energy's Santa Susana Field Lab site levels stipulated in the Administrative Order of Consent and not include consideration of alternatives that violate this Order.
2. Ineligible exemptions utilized in the Draft Environmental Impact Statement that dramatically increase the risk of cancers should be excluded.
3. Alternate transportation plans should be analyzed that include direct conveyance of contaminated materials from the site to rail and other options including the use of fire roads and routes with less impact to residents and reduced traffic impact.

For over three decades, FoLAR has worked to create an enduring vision for the LA River that acknowledges her importance for the revitalization of both urban ecology and urban communities across Los Angeles County. These efforts are now being supported by federal and local revitalization efforts such as U.S. Army Corps of Engineers ARBOR river-restoration project (ARBOR), and the City of Los Angeles River Revitalization Master Plan (LARRMP).

170-1

170-2

170-3

170-4

170-1 The City of Los Angeles' comments have been reviewed and changes to this Final EIS have been made where appropriate. DOE prepared this EIS to address the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. The EIS evaluates separate sets of alternatives for the three components of the cleanup project: soil remediation, building demolition, and groundwater remediation. Please refer to "Preferences for an Alternative," and 2.2, "Compliance with the AOC," of this CRD for further discussion. Also, refer to Chapter 2, of this EIS for a description of the alternatives evaluated and a summary of the potential environmental impacts.

170-2 DOE acknowledges your preference for cleanup in accordance with the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

170-3 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. There would be no dramatic difference in the risk of cancer among any of the soil remediation action alternatives (see Chapter 4, Section 4.9 in this Final EIS); each of the action alternatives would be protective of human health and the environment.

Commenter No. 170 (cont'd): Marissa Christiansen,
Friends of the Los Angeles River



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CA 90065
323.223.0585
CONTACT@FOLAR.ORG

April 13th, 2017

These efforts are poised to bring numerous benefits for water resource management, public health, economic development, community revitalization, quality of life, and ecological health to all Angelenos throughout the County.

Situated on the headwaters of one of the major tributaries of the LA River - a keystone area for the Los Angeles River watershed - the cleanup of the Santa Susana Field Lab has the potential to significantly impact our efforts to restore the natural, cultural, and ecological heritage of the LA River.

For this and many other reasons, we strongly urge you to include and implement the City of Los Angeles comments in the Draft Environmental Impact Statement for the cleanup of the Santa Susana Field Lab. We look forward to hearing your response and comments.

|| 170-1
cont'd

Sincerely,

Marissa Christiansen
Executive Director
Friends of the Los Angeles River

170-4 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

**Commenter No. 171: Karen DiBiase, Chair Environmental Committee
and L. Joyce Fletcher, President, Woodland Hills Warner Center
Neighborhood Council**

From: Karen DiBiase
Sent: Thursday, April 13, 2017 6:28 PM
To: Jennings, Stephanie
Cc: Joyce Fletcher; Dennis DiBiase; Albert Saur
Subject: Response to DOE's Draft EIS from Woodland Hills-Warner Center Neighborhood Council
Attachments: NC Environmental Letter DOE EIS BM 3.17 SSFL signed.pdf

Dear Stephanie-

Please see the attached letter from the Woodland Hills-Warner Center Neighborhood Council, dated March 8, 2017.

We unanimously voted to support of a "risk-based" cleanup of Area IV and the Northern Buffer Zone of the SSFL, and do not support the extreme cleanup required by the 2010 Administrative Order of Consent (AOC). We are concerned about the environmental impact and exposure to our community by the hauling presumably toxic soil through our Woodland Hills-Warner Center neighborhoods and business districts.

171-1

The WHWCNC supports the removal of soil that presents a risk to human health, which includes radioactive material. We support the removal of soil and chemicals that are above a risk-based level, and we support clean-up on site where possible in order to reduce the amount of truck-loads affecting our nearby communities and highways. We respectfully request the truck routes avoid our populated areas.

171-2

We look forward to working with you on these issues.
Sincerely,

Karen DiBiase
Member of WHWCNC, Area I
Chair of WHWCNC Environmental Committee

171-1 DOE acknowledges your support for cleanup of soil above a risk-based level, on site clean-up where possible in order to reduce the numbers of truck-loads of soil leaving SSFL, onsite treatment of TCE and PCE plumes, and continuing monitoring of groundwater. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

171-2 As discussed in Chapter 2, for the Final EIS DOE revised the EIS analysis to reflect a more realistic average of 16 heavy-duty truck round trips per day for soil removal activities, although on some days the number of daily truck shipments could increase to 32. This revision extended the projected time for completion of the soil remediation alternative involving the most heavy-duty truck shipments, the Cleanup to AOC LUT Values Alternative, from the 10 years evaluated in the draft EIS to the 26 years evaluated in the Final EIS. DOE evaluated transport of waste from SSFL down Woolsey Canyon Road, then via multiple local roadways to local freeways.

Considering all remediation activities at Area IV and the NBZ (i.e., soil remediation, building removal, and groundwater remediation), daily shipments attributable to DOE remediation activities would not exceed 32 and generally would be considerably less. However, NASA and Boeing could also be making shipments of waste, backfill, and equipment during some of the same years that DOE would be making shipments of waste, backfill, and equipment. As discussed in Chapter 2, Section 2.4.4, of this Final EIS, DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of trucks allowed on Woolsey Canyon Road to no more than 96. The potential cumulative impacts of site remediation by DOE, NASA, and Boeing are evaluated in Chapter 5 of the EIS, including the risks associated with transport of waste and material and the potential impacts on traffic in the SSFL area. DOE expects that daily heavy-duty truck shipments potentially as high as 96 per day from DOE, NASA, and Boeing would only occur for a few years. Note that if the total number of cumulative shipments was reduced from an average of 96 per day to 50 per day, it would reduce the annual emissions of airborne pollutants by the three parties as well as other environmental impacts such as annual water use, but it would not reduce the overall risks or impacts attributable to the projected cumulative operations but would spread them over a longer period of time.

In accordance with the transportation agreement, trucks would depart the site between 6:00 a.m. and 7:00 p.m. Regarding the use of truck routes that avoid populated areas, including routes for trucks transporting radioactive material, DOE and DTSC have determined that Woolsey Canyon Road is the most appropriate route from SSFL.

Commenter No. 171 (cont'd): Karen DiBiase, Chair Environmental Committee and L. Joyce Fletcher, President, Woodland Hills Warner Center Neighborhood Council



March 8, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Summary of EIS about clean-up of Santa Susana Field Laboratory

Dear Ms. Jennings,

On March 8, 2017, at a publicly held meeting, the Woodland Hills-Warner Center Neighborhood Council voted to approve the following motion with a vote of 18 yes, 0 no, 0 abstain.

Motion: The WHWCNC applauds your decision to consider several methods of "cleaning up" in the EIS for remediation of Area IV and the Northern Buffer Zone of the SSFL, formerly occupied and used by the Atomics International Division of North American Aviation, Inc. We have been concerned and worried about the clean-up that was required under the 2010 Administrative Order of Consent (AOC) which stipulated a clean-up to background and no other clean-up considered. We were concerned about the environmental impact of hauling one million cubic yards of presumably toxic soil through our neighborhoods, past our schools, exposing us and our children to material from the trucks that might be blown off on windy days.

As a neighborhood council of the City of Los Angeles, we reaffirm our position taken in 2015 for a "risk-based" cleanup of the NASA area. Applying the same level of clean-up to Area IV should be considered in order to protect the natural resources, wild life, and neighboring communities from excessive transportation of soil for remediation.

We also support your intention of changing the terms of the AOC to allow the decision to be made on the total environmental impact rather than just one very strict one, "background." We also note that in the draft EIS the statement appears that clean-up to background is practically impossible because various carcinogenic carbon-chlorine and related compounds have migrated far down into the soil and into the ground water of the site. Removal of the contamination is not feasible and the terms of the AOC cannot be carried out.

The WHWCNC supports the removal of soil that presents a risk to human health, which includes radioactive material. We support the removal of soil and chemicals that are above a risk-based level. We support clean-up on site where possible in order to reduce the amount of truck-loads affecting our near-by communities and highways. We support the continuing monitoring of the ground water and the on-site treatment of TCE and PCE plumes.

171-1
cont'd

171-3

171-1
cont'd

(Please see the transportation analysis in the DTSC *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* [DTSC 2017b].) Consequently, it is not possible to avoid all populated areas. Please see Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for further discussion of this subject.

171-3 At this time, DOE has not made any specific cleanup decisions. As discussed in Chapter 2, Section 2.3.3, of this Final EIS, based on the uncertainty regarding whether cleanup based on the 2010 AOC (DTSC 2010) could be implemented, DOE evaluated potential alternatives that, when completed, would leave Area IV and the NBZ in a state that is protective of human health and the environment. DOE consulted applicable regulations and guidance in developing two reasonable alternatives to the Cleanup to 2010 AOC LUT Values Alternative. These alternatives are described in Chapter 2, Section 2.4 of this Final EIS. As described in Section 2.4, DOE expects that implementation of any alternative would require changes to the 2010 AOC. The 2010 AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives.

Commenter No. 171 (cont'd): Karen DiBiase, Chair Environmental Committee and L. Joyce Fletcher, President, Woodland Hills Warner Center Neighborhood Council

We respectfully request that the number of truckloads be kept to a cumulative daily maximum of 50, and to transport material during daylight hours only, for driver safety reasons. We also respectfully request the truckloads of radioactive material travel routes that avoid our populated areas, for public safety reasons.

171-2
cont'd

We also recognize that the decision behind the AOC was a story published in a local newspaper about a serious accident at the SRE nuclear reactor in 1959. The published story compared the accident with an accident at a reactor at Three Mile Island in Pennsylvania several years later. The story was based on reports prepared at the time by employees of Atomics International and published in the open literature. The SRE incident was the result of foreign material getting into the sodium coolant and partially blocking flow in some of the tubes containing fuel rods. Some of the fuel elements were damaged and leaked radioactive material into the sodium coolant. As a result very little radioactive material escaped into the environment. In contrast the Three Mile Island accident involved an unintended lowering of the cooling water in a reactor that was shut down but the fuel elements were still very radioactive. At TMI, the hot fuel elements were exposed to the atmosphere and a large amount of radioactive material was released. The writer of the newspaper article about the SRE didn't understand the difference between the two reactors, one cooled with sodium and one with water.

It is a relief, then, to read the newly proposed summary EIS in which several alternate clean-ups are to be considered. The selection is to be made on considering not only the environment of the SSFL area but also the environment of the residents of Woodland Hill and of communities that surround the former Area IV site. We look forward to seeing the final EIS and the decision as to how to proceed.

171-4

Sincerely yours,



L. Joyce Fletcher, President

Woodland Hills-Warner Center Neighborhood Council

171-4 Thank you for your comment. DOE prepared this Final EIS to address the cleanup of those portions of SSFL for which it is responsible – Area IV and the NBZ. The EIS evaluates separate sets of alternatives for the three components of the cleanup project: soil remediation, building demolition, and groundwater remediation. Please refer to Sections 2.1, “Preferences for Cleanup,” of this CRD for further discussion. Also, refer to Chapter 2 of this EIS for a description of the alternatives evaluated and a summary of the potential environmental impacts.

Information on the selection of alternatives for cleanup of SSFL Area IV and the NBZ will be included in the Record(s) of Decision (ROD[s]) for the EIS. The ROD(s) will follow no sooner than 30-days after publication in the *Federal Register* of the EPA Notice of Availability for this Final EIS. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation for implementation. The ROD(s) will present DOE’s decisions regarding cleanup and describe the factors considered in making those decisions.

Commenter No. 172: Mary Wiesbrook,
Save Open Space Santa Monica Mountains



April 13, 2017

RE: Draft EIS for Remediation of Area IV and Northern Buffer Zone at SSFL

A purpose of NEPA is to present a review of environmental impacts from a proposed project that could foreseeably occur from the proposed projects and present alternatives that would result in less environmental damage. We thank DOE for presenting alternatives cleanup scenarios and their impacts on truckloads, earth, air, and water.

We are concerned about the proposed Biological and Cultural Exemption Areas. Remediation for chemicals and risk assessment for Radionuclides must be done within the Conservation of Natural Resources Exception Areas if there is human health risk. These green hatched marked areas seem overly large. Were these areas determined by Fish and Wildlife and the Native Americans? It is critical that DOE take action in any of these natural resources exemption areas if it is demonstrated that levels of soil constituents are a risk to human health and soil removal is necessary. The RMDf and Plutonium (Plutonium Research) Building areas after building removal need to be sampled and tested. Then this area should be cleaned up per agreed on clean up.

We support Cleanup to Revised Look-Up Table Values Alternative. DOE would remove soil exceeding revised LUT values. Chemical cleanup LUT values would be based on the direct exposure pathways for suburban residential scenario. This document states that Boeing is committed to end use of open space recreational. In clean ups done nationally, this end use of open space recreational does not normally require this strict of a clean-up. What's significant here is that: "The radionuclide LUT values would be the same as for the Cleanup to AOC LUT Values Alternative."

This Cleanup to Revised LUT values will: remove 192,000 cubic yards of soil, use 8.3 million gallons of water, generate truck trips of 23,800 round trip truck trips

P.O. BOX 1284 AGOURA HILLS, CA 91376

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172-1 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the methods used to establish the exemption areas. The exemption areas shown in the Draft EIS were developed based upon information available at the time the draft was written and will be modified by completion of the biological and cultural resources consultations. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on applying the biological exemption process to soil cleanup locations in Area IV and the NBZ.

As discussed in Chapter 2, Section 2.3.2, of this Final EIS, if levels of chemical or radioactive constituents in exemptions areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove them through carefully planned, focused removals that would result in minimum disturbance. Soils exposed by the removal of buildings would be characterized and cleaned up according to the alternative selected for soil remediation.

172-2 DOE acknowledges your support for the Cleanup to Revised LUT Values and Groundwater Treatment Alternatives. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for further discussion of this topic.

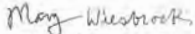
172-3 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS was revised to reflect the covenant, its restriction measures, and a soil cleanup scenario under the Conservation of Natural Resources Alternative consistent with use as open space (e.g., exposure to a recreational user).

Commenter No. 172 (cont'd): Mary Wiesbrook,
Save Open Space Santa Monica Mountains

over 2.5 years for removal and backfill, and impact air quality 28,000 to 84,000 tons a year for 2 years.

Groundwater remediation should be done to the groundwater treatment alternative. Groundwater plumes should be treated using active treatments selected from among pump and treat, enhanced in-place treatment, soil vapor extraction and dewatering. We request that the 2 Simi Valley wells below the SSFL Mountain used for blended drinking water be required to have the wells source water tested for all SSFL Chemicals of Concern and all SSFL Radionuclides. The test methodology should not allow filtering the source water when testing the rads and metals.

Sincerely,



Mary Wiesbrook, Chair and Retired State of California Clinical Laboratory Scientist

172-2
cont'd

172-4

172-4 The testing of utility water supply wells is performed by the water purveyor. DOE recommends that you contact the water company for the sample results.

Commenter No. 173: Pat Tumamait

From: Pat Tumamait
To: [Jennings, Stephanie](#)
Subject: SSFL
Date: Thursday, April 13, 2017 11:10:39 PM

Hello Stephanie, Just a few of comments.

- 1. Any recorded archaeological site must have a 50 foot buffer zone to be left intact. No earth disturbance.
- 2. During the removal of the contaminated soil in or near a recorded archaeological site must be tested to further avoid costly adverse impact to the site.
- 3. A Native American Chumash monitor and a qualified Archaeologist be present during any Earth disturbing activity in or near an Archaeological site.
- 4. In the event that Artifact's are present during the excavation of the contaminated soil and the artifact's can not be collected. I would suggest this material be set aside for review on how to collect these item's.

Sincerely,

Patrick Tumamait

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- 173-1 All archaeological sites have been mapped with a buffer zone to ensure they will not be disturbed during site remediation. Furthermore, all ground-disturbing activities will be performed in accordance with the procedures and protections contained in the NHPA Section 106 Programmatic Agreement. If conditions require cleanup within the buffer zone, so as to protect human health and the environment, cleanup efforts would be performed in a focused manner to minimize adverse effect.
- 173-2 Known archaeological sites that are exempted according to the 2010 AOC process would be protected by a buffer zone included in the GIS (geographic information system) mapping data associated with each site location. If monitoring of cleanup activities finds that a site extends beyond the protected area then DOE would follow the procedures outlined for inadvertent discovery in the NHPA Section 106 Programmatic Agreement being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC.
- 173-3 As presented in Chapter 6, Table 6-1, Minimization Measure 11-2, 'Tribal consultation' of this Final EIS DOE will require attendance by and designate a Native American monitor during remedial activities that result in soil disturbance. DOE will also require the presence of an archaeological monitor during any cleanup activities at a known archaeological site, including within the site's buffer zone.
- 173-4 As presented in Chapter 6, Table 6-1, Minimization Measure 11-2, 'Tribal consultation' of this Final EIS any tribal cultural resources encountered during remedial activities will be managed in consultation with Native American stakeholders (e.g., left in place, collected and moved to a secure location, collected for curation). The NHPA Section 106 Programmatic Agreement being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC will establish procedures for making eligibility determinations on unevaluated sites, as needed, and inadvertent discoveries, along with procedures to assess effects and resolve adverse effects if they are determined eligible for the NRHP.

Commenter No. 174: Gregory S. Pfeifle

From: [REDACTED]
To: [Jennings, Stephanie](#)
Subject: NEPA Document Manager, Santa Suzana Field Lab (SSFL) Area IV EIS
Date: Sunday, March 12, 2017 8:24:28 PM

I am writing to express my support with the public outcry for clean up of the SSFL, and my support of the Ventura County Board of Supervisors position urging the U.S. Department of Energy to conduct a stringent cleanup of the site. Stalling for 58 years is long enough. It is time to be responsible, to be accountable, and to do the right thing. Stop shifting the blame, avoiding responsibility, kicking the can down the road. Just clean the mess up. I was one of the unfortunate children who grow up near the facility and, in my adult years, lived and worked near the site. In theory, I should have been exposed to the contamination following the "accident" in 1959. Today, I am dealing with a rare form of Leukemia, the only known cause of which is *prolonged or continuous exposure to radiation*.

Do the right thing. Clean up the SSFL !!

Mr. Gregory S. Pfeifle
Newbury Park, CA

174-1

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174-1 DOE acknowledges your concern about complete cleanup of SSFL and your support of the Ventura County Board of Supervisors position on stringent cleanup. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD(s) pursuant to NEPA. Information on the selection of alternatives for cleanup of SSFL Area IV and the NBZ will be included in the ROD(s) for the EIS. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) that applies to the entire SSFL site prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

174-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about cleanup of SSFL, as well as Section 2.7, "Offsite Impact," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 175: Marshall A. and Ellen Glick

Sent: Sunday, February 19, 2017 1:21 PM
To: The Secretary
Subject: Form submission from: Contact Us

Submitted on Sunday, February 19, 2017 - 13:20

Topic or category: Environment
Affiliation: General Public
Subject: SSFL Contamination Must Be Removed
Message:

As you can see from the forwarded SSFL Work Group email below, the SSFL cleanup is in jeopardy again! The DOE issued a Draft Environmental Impact Statement last month, riddled with poor excuses as to why they should be allowed to leave up to 94% of the contamination in place. We are urging you to take action!

To whom it may concern at the Dept. of Energy. It is critical for public health and safety that the DOE complete the full cleanup (95% left to do) of the SSFL. I beg you to not allow the terrible contamination to be left behind. My family and I are at risk, as are all of the families that will be adversely affected if the contamination remediation is stopped. Please do all you can to get all of this contamination removed.

Marshall A. Glick and Ellen Glick

175-1

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175-1 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, of this CRD the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. The Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ.

175-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for a discussion of commenters’ preferences for cleanup. DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities. Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 176: Mary E. Carr, Executive Director,
Ventura County Medical Association



"ADVOCATES FOR PATIENTS, PHYSICIANS
AND QUALITY MEDICAL CARE"

April 17, 2017

Ms. Stephe Jennings
NEPA Document Manager, SSFL Area IV EIS
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Draft EIS for SSFL Cleanup

Dear Ms. Jennings,

The Ventura County Medical Association (VCMA) is an association of physicians whose purpose is to promote the science and art of medicine, the care and well-being of patients, the protection of the public health, and the betterment of the medical profession; to cooperate with organizations of like purposes; and to unite with similar societies in the State of California as component societies of the California Medical Association.

With this in mind we wish to express our concern regarding potential health risks to the people of Ventura County posed by the continued contamination of the Santa Susana Field Lab site. We are aware of studies showing a trend toward increased incidence of cancer in the areas around the field lab site and continue to support the 2010 cleanup agreement which stipulated removing contaminants to background levels. We expect the US Department of Energy to set the example for all other parties still responsible for contaminated areas in Ventura County.

Sincerely,

A handwritten signature in blue ink that reads "Mary E. Carr".

Mary E. Carr, Executive Director
On behalf of VCMA Board of Governors and Members

Cc: United States Senators Dianne Feinstein and Kamala Harris
United States Representative Julia Brownley
California EPA Secretary Matt Rodriquez
California Department of Toxic Substances Control Barbara Lee

176-1

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- 176-1 DOE shares the commenter's concern regarding potential risks associated with those portions of SSFL for which it is responsible, Area IV and the NBZ. Although some studies have implied a correlation between offsite illness and SSFL, those studies do not show a trend and the authors acknowledge limitations in the studies. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of these studies. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 176-2 DOE acknowledges your support of the 2010 AOC which stipulates removing contaminants to background levels. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 177: Jennifer McNulty

I moved to [REDACTED], Thousand Oaks, CA in December 1996 when I was 7 months pregnant. That is considered the Lang Ranch area of Thousand Oaks. Years prior to development, I was told by a police officer, that his friend was a fireman who used to regularly accompany the tanker trucks who used to DUMP percolate and other waste from Rocketdyne into the arroyos, and depressions in the land, thinking it would just absorb into the dirt. Apparently most of that fire team died of cancer. In any event... I don't know how many chemicals existed when that land was graded for the new homes. I do know that I became ill with thyroid tumors, and hypothyroid, and in 1999 was diagnosed with thyroid cancer. My typically developing son was often ill when young, and later diagnosed with regressive autism. How much is directly related to contaminants lingering from years later is impossible to know.

I know that Senator Barbara Boxer has tried for years to initiate clean-up operations, and the EPA under Bush put a GAG order on her. It's despicable.

We have spent hundreds of thousands trying to recover our health.

Jennifer McNulty

177-1

177-1

Thank you for your comment. It has been included in the Administrative Record for this Final EIS. Whereas the incidences from the past referred to in the comment may or may not be accurate, they are not relevant to the current effort. DOE's current focus is to complete the cleanup of those portions of SSFL, Area IV and the NBZ, for which it is responsible.

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177-2

Thank you for your comment. It has been included in the Administrative Record for this Final EIS.

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cont'd

Commenter No. 178: Anonymous

I oppose the cleanup alternatives proposed in the draft EIS, all three of which violate the 2010 Administrative Order on Consent that requires DOE to clean up all detectable contamination. I have lived within 5 miles of the site my whole life and only learned about these issues less than a decade ago. I demand that the DOE cleanup to the standards set in the 2010 AOC, which are actually protective of my health!

Anonymous

178-1

178-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including a discussion that explains how the Cleanup to AOC LUT Values Alternative meets with the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values).

Commenter No. 179: Edward Weisner

Thank you for affording me the opportunity to comment on the Draft EIS for Remediation of Area IV and the NBZ of the SSFL. I started working at the Atomic Energy Division of North American Aviation in July 1950. (The name was later changed to Atomics International). I specialized in nuclear engineering. I retired from AI in February 1987. I was involved in selecting the specific site for the Sodium Reactor Experiment (SRE) at the SSFL after the AEC approved its construction. I was also involved in the design of the reactor and in determining the amount of enrichment of the uranium fuel which we then ordered from Oak Ridge National Laboratory. In those days there was no such thing as an Environmental Impact Report.

I think the people who are now involved with cleaning up the site and getting rid of the contamination are doing a great job as evidenced by the quality of the draft EIS. I congratulate them for a job well done!

179-1

179-1 Thank you for your comment.

Commenter No. 180: Anonymous

As a homeowner in the West Hills / Chatsworth area, I support the 2010 AOC requirements that have already been agreed upon by all of the regulatory agencies. I concur with DTSC director Barbara Lee, that “it appears DOE is proposing clean-up approaches that fail to fully recognize the AOC provisions that apply to sensitive plant and animal species located at SSFL.” The site should be cleaned up to the most stringent health and safety standards to protect the natural environment, neighboring communities, children, wildlife, homeowners, and future generations.

I also believe that any companies that profited from the R&D at Area IV should bear the brunt of the costs for the majority of the cleanup. We can not allow profits to be privatized, and pollution to be socialized. That is an unsustainable model. This project has been dragging on for decades, and it’s time for DOE to stop stalling and resisting. Let’s get going on cleaning up this gigantic mess in the way that has already been agreed to, the AOC.

Furthermore, from this day forward, we must all be good stewards of the land, and like our Native American elders, think SEVEN GENERATIONS into the future. Whatever we do to the web of life, we do to ourselves. The scars at Santa Susanna resulted from short-sighted decision-making, and they can not be healed with more short-sightedness.

Thank you for your consideration

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180-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. This Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with the approach used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ.

180-2 The Energy Technology Engineering Center in Area IV of SSFL was a U.S. Government research facility. DOE and its predecessors hired contractors to operate the facility and operations were conducted according laws in effect at the time and the contractual arrangement between the contractor and DOE. As a government facility, DOE is responsible for conducting the environmental remediation of the site.

180-3 Thank you for your comment. It has been added to the Administrative Record for the EIS. DOE evaluated alternatives for contamination removal and site remediation that, when implemented and completed, would leave Area IV and the NBZ in a state that was protective of human health and the environment. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for a discussion of this topic and DOE’s response.

Commenter No. 181: Kristine Stroud-Endo

Please consider a more extensive clean up of this toxic site at Santa Susana. A limited clean up will still leave the surrounding areas at risk of toxins in the environment. It is important to me as I have children and am concerned about this. We are not sure what the short or long term health implications are.

I have heard there are 30 plus children in the area with rare types of cancer.

I would like to see this site cleaned up sufficiently and completely.

Thank you,

Kristine Stroud-Endo

181-1

181-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent” of this CRD for additional information.

181-2

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

181-1 cont’d

181-2

181-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. All of the action alternatives evaluated for DOE’s cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 182: Rebekah Robinson

I lived in Simi Valley for 15 years. I only just recently moved away, but all of my friends and family still live there.

I constantly hear about many people in the community struggling with rare forms of cancer.

SSFL had a few meltdowns. The July 1959 meltdown is the worst in US history and 3rd worst in the world. The experimental facility had NO containment structures not to mention the illegal storing, disposal, and burning of explosive material and hazardous waste.

You know all this though, yet are still choosing to cut corners on clean up! It's unacceptable! We need the best clean up possible to avoid further health problems in the community. The history of this property cut corners in disposal and clean up. Don't cut corners again!!!

Rebekah Robinson

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182-1 DOE refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

182-2 Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer.

Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the two experts was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

With respect to the statements regarding burning radioactive and chemical waste in open pits, the Former Sodium Disposal Facility was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The facility was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in

Commenter No. 182 (cont'd): Rebekah Robinson

1998 by the California Department of Health Services (now California Department of Public Health). Additional information can be found at http://www.etec.energy.gov/Operations/Support_Ops/FSDF.html. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

- 182-3** DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup" and Section 2.2, "Compliance with the 2010 Administrative Order on Consent" of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Regarding potential health problems related to SSFL, please refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 183: Nancy Ryan

The DOE needs to follow through and complete the clean up agreement made in 2010. I am appalled they are backing out.

Nancy Ryan

|| 183-1

183-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 184: Megan Cleveland

Urging a full clean-up of the site. The health risks to the surrounding community are much too high to play around with.

Megan Cleveland

184-1

184-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Regarding potential health risks related to SSFL, please refer to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 185: Mark and Renee Dauw

I am emailing you today to urge your department to do a full clean up of the Santa Susana Field Laboratory.

This mess is absolutely affecting the adults and most alarming, the youth of this community. We should know, because we live in West Hills at the top of Ingomar Street, approximately 2 miles as a crow flies from the facility and my teenage daughter was diagnosed with a very rare form of leukemia last May, 2016. She is currently a senior in high school and has had to endure so much this year and it is heart-breaking. Her leukemia is so rare, that the Oncology Department at Children's Hospital Los Angeles said they have seen very few cases of APL leukemia. My daughter has spent the past year enduring a very rigorous treatment schedule while trying to stay in school and complete her senior year. She is a fighter and has finished her treatments and is cancer free and looking forward to going to college next year. With that said, she will be monitored monthly for the next 3 years having to get monthly blood work and bone marrow biopsies every three months while she is in college. But honestly, will she ever be free from the worry of a relapse? Just as she is starting the most exciting time of her life. My husband and I had no idea that we raised our family in the backyard of a still contaminated site. Although my daughter is extremely fortunate to have been very responsive to her treatment, I know of dozens of other children in our area that are suffering from horrible and rare cancers. PLEASE PLEASE DO SOME SORT OF STUDY ON CHILDHOOD CANCER IN THE AREA. The other studies that have been done on this only focused on adult cancers. Children are far more susceptible to the ill effects of these contaminants.

The areas around this site are some of the most wonderful areas to raise families. We personally live on top of a hill that has beautiful views of the Santa Monica Mountains. This area deserves to have it restored to its original condition and the residents of the surrounding areas deserve to know that they are raising their young children in a safe and healthy environment.

Mark and Renee Dauw

185-1

185-1 DOE acknowledges your preference for a full cleanup of SSFL. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences for cleanup.

185-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

185-2

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

185-1
cont'd

Commenter No. 186: Paul Attkisson

As a qualified nuclear operator for US Naval propulsion, I know just how costly and tricky a nuclear clean up is. As a kid growing up in Thousand Oaks, I have received a higher total effective dose than any of my colleagues who work in the industry. Our nuclear reactors have come a long way in terms of safety and containment. I do not foresee any more nuclear meltdowns due to this progress. We know more now. It is worth the investment to properly clean up the radiological risks, since in my opinion, nuclear operators know how to limit the release of radioactive contamination in the rare event of a malfunction. We progressed in technology and safety that even if something were to happen, an accident would not cause the slightest risk to even the nuclear workers at a plant. Safety has grown tremendously over the last decades in the industry. The potential for more dangerous radioactivity is gone.

Now it's time to clean up the past results of experimentation. If we take action to fully clean up the area in the SFV, we not only reduce the risk of cancer in our citizens, but also invest in the overall planetary health in the SFV. The effects of radiation on the environment can leave the SFV barren and decrepit if left untreated or a lackluster clean up is conducted. I urge the DOE to take no short cuts to ensure a safe dose is received by its citizens, and to limit the erosion and embrittlement of the environment in the surrounding counties.

Paul Attkisson

186-1

186-1

DOE acknowledges your preference for a full cleanup of SSFL. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences for cleanup, and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information regarding soil cleanup alternatives.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Based on current knowledge, there is no cleanup in the San Fernando Valley related to DOE's operations in Area IV.

Also, please refer to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL" of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. All of the action alternatives evaluated are protective of public health and safety and the environment.

Commenter No. 187: Christina Bryan

Please completely clean up The nuclear waste from Santa susana field station affecting the West Hills community.

Many familes live very close to the contamination. My kids are very young and I worry about their health as several small children have developed rare cancers in our community.

Please clean the area as if your own children were living there. Thank you very much.

Christina Bryan

187-1

187-2

187-1 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. As described in Section 2.7, “Offsite Impacts” of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA’s soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC’s review of the data (included as part of DTSC’s broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

187-2 DOE acknowledges your concern and refers you to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD to get a better understanding of the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Also, please see Section 2.8, “Cancer and Other Illnesses Near SSFL” of this CRD for discussion of studies performed regarding illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 188: Laura Cabam

You must do a thorough and immediate clean up of the Santa Susana Field Lab. Failure to do so is putting residents at risk and there have already been many children riddled with ridiculously rare cancers within a 20 mile radius of the site.

188-1

Research into the links between cancer and the chemicals deposited in the earth needs to be done.

188-2

The health and safety of residents is your responsibility and failure to take action is negligent, wrong, and inhumane. Do the right thing.

**188-1
cont'd**

Laura Cabam

188-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

188-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for discussion of studies performed regarding illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 189: Karen Astrachan

Please, do not turn a blind eye to our children's health. They deserve to live in areas that are not knowingly toxic. Do something!! Clean up this mess.

What if it was your child at risk?

Karen Astrachan

189-1

189-1

DOE acknowledges your concern and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 190: Anonymous

Please please conduct a full clean up of the area.

|| 190-1

Too many are sick and terminally ill because of the toxins in the area!!!

|| 190-2

How do you all sleep at night knowing children are at risk??

Anonymous

190-1 DOE acknowledges your desire for a full cleanup of the site. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for a discussion of commenters’ preferences. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

190-2 Thank you for your comment. Please see Section 2.8, “Cancer and Other Illnesses Near SSFL” of this CRD for discussion of studies performed regarding illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 191: Rachel Pacio

I find it absolutely unacceptable to leave contaminants on the site!! This is affecting the health of the people and especially children.

|| 191-1
|| 191-2

Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable.

|| 191-3

Not having a full survey done of the risk to children in our communities, not acceptable.

|| 191-2
cont'd

Rachel Pacio

191-1 Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent” of this CRD for a discussion of soil remediation alternatives. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites.

As discussed in Section 2.4 of this Final EIS, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

191-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

191-3 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic,

Commenter No. 191 (cont'd): Rachel Pacio

human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to clean up the site, the more transportation will be required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. This EIS shows that the transportation risks are very small. Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 192: Cheryl Devecka

My family was recently relocated from the east coast to Westlake Village, CA.

We are currently renting a home in Westlake and as part of the rental agreement we had to sign a disclosure that we were living in a high risk cancer area.

This bit information was not explained to us and could have very easily been overlooked. The realtor seemed to not have an further information then what was given to us to sign. My husband felt there must be more to the story and started finding information regarding Rocketdyne and the melt down in the 1950's.

Needless to say we were uncomfortable with this new information. I have met numerous young adults in the last year here that have rare cancers.

We plan on moving when our lease is up.

We cannot believe that the people we have met are completely unaware of the situation or feel that it is not a real risk. Drastic measures need to be taken to not only clean up this disaster, but also educate the people that are directly affected but it.

Cheryl Devecka

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192-3

192-1 As indicated in Chapter 1 of this Final EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater. Chapter 1, Section 1.3, of this EIS, contains a brief history of activities at SSFL and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV can be found at <http://www.etec.energy.gov/>. Chapter 3, Sections 3.9.5 and 3.9.6, of the EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. These sections also include information about health studies performed by independent organizations such as the Agency for Toxic Substances and Disease Registry (ATSDR), and the conclusions from those studies. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem, less than one-third of the original estimate. This dose would result in a corresponding risk of fatal cancer of less than a third of that original estimate.

Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident would likely have involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the two experts was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

Commenter No. 192 (cont'd): Cherilyn Devecka

Rocket engine testing was a completely separate activity from the nuclear research DOE and its predecessor agency conducted in Area IV; and was conducted in locations other than and physically separated from Area IV, by entities other than DOE. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, please see Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of these topics and DOE's responses. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in compliance with regulatory requirements, including regulations, orders, and agreements.

- 192-2** DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for accurate information about contamination in the area around SSFL and discussions of studies of illnesses related to SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 192-3** DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to the DOE Energy Technology Engineering Center website (see <http://www.etec.energy.gov/>) which describes past activities at SSFL, detailed sampling and monitoring data, public workshops on remediation of SSFL, and other information, including links to remediation activities at SSFL by NASA and Boeing.

**Commenter No. 193: Larissa Webster, RN,
St. John's Pleasant Valley Hospital, Emergency Department**

Full clean up and disclosure required. This is not acceptable in this community and has caused such devastation and catastrophic illnesses. Let's protect any potential patients we can and help protect the health of our population.

Larissa Webster, RN

193-1

193-2

193-1 DOE acknowledges your desire for a full cleanup of the site. Please refer to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent" of this CRD for a discussion of soil remediation alternatives. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

193-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The available data do not indicate devastation and catastrophic illness in the community. Regardless, DOE's purpose in preparing this Final EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in a cleanup of Area IV and the NBZ that is protective of public health and safety and the environment.

Commenter No. 194: Breanna Galbraith

As a biology/applied health major, it's crazy to make we that a full clean up has not yet been done, and that families are moving nearby with no real understanding of what the potential dangers are. At the very least there should be an ongoing record of rare cancers and illnesses within certain ranges of the site.

Breanna Galbraith

194-1

194-2

194-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

194-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for accurate information about contamination in the area around SSFL and discussions of studies of illnesses related to SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The California Cancer Registry does track incidences of cancer throughout the State. Information on the program if available at <http://www.cccal.org/>.

Commenter No. 195: Susie Ellis

I want to let you know that leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, is also not acceptable. Not having a full survey done of the risk to children in our communities is completely not acceptable.

Susie Ellis

|| 195-1
|| 195-2
|| 195-3

195-1 DOE acknowledges your concern for cleanup of SSFL. Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent” of this CRD for a discussion of soil remediation alternatives. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors (refer also to Section 2.5, “Toxicity of Soil Contaminants,” of this CRD). Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

195-2 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE’s intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to clean up the site, the more transportation will be required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing soil with low concentrations of chemicals and radionuclides requires more truck trips from the site. This Final EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 195 (cont'd): Susie Ellis

- 195-3** DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 196: Anonymous

My daughter who is 2.5 has a rare liver disease only 1 in 18000 kids get. I can't help but wonder living in Simi Valley near Kuehner how this has may have impacted her health. She will need a liver transplant. We must care about the health and safety of everyone especially our children!

Anonymous

196-1

196-1

DOE refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 197: Tim Gray

I find it completely unacceptable that the cleanup of the SSFL has not started even though it was agreed upon almost ten years ago. Per the DTSC spokesperson, a draft environmental report has not even been prepared yet. After all these years no report? This looks like negligence to me.

Tim Gray

197-1

197-1 There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

197-2

197-2 As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL. The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (was issued by DTSC in 2017 (DTSC 2017b). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. Soil cleanup would begin after DOE and DTSC conform the decisions included in the DOE Record of Decision for this EIS and the DTSC Notice of Determination and, in accordance with DTSC's regulatory authority as provided in the AOC, DTSC approves the DOE-prepared soils remediation action implementation plan.

Commenter No. 198: Nicole Eggert

This is my daughter Grace [REDACTED], she was diagnosed with a Leukemia so rare that only 1 out of 1 million kids will ever get it, we had lived in West Hills for nearly four years before diagnosis. We did not know that we were living only miles from a toxic nuclear melt-down in the hills of Simi Valley, the Santa Susana Field Lab. I want you to see what childhood cancer looks like. I want you to see the risk to your family, because the Department Of Energy wants you to think that leaving the waste on site will not cause any harm. "Leaving it be" means more of the contamination will migrate when it is windy or when it rains and people will continue to be exposed. And it's not just a little contamination, it's a lot and even Boeing's risk assessment reports show just how high the risk is today - in some areas, 3 in 10 exposed would get cancer, in other areas of the site, as high as 9 in 10 would. We've found 30 other children with rare cancers who live within 20 miles of the site. I'll be introducing you to them over the next few days. No study has been done on childhood cancers related to the site. We want answers, and we want a full cleanup. I'm asking that everyone lets the DOE know that leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, is completely not acceptable. It is disgusting and grossly negligent of those who are fighting the correct way to fully clean this site to prevent further harm to those living nearby. I'd like to see how differently those fighting the cleanup would feel if they were forced to live in these neighborhoods with their young children. I'm sure they'd be less concerned about the price of cleanup.

Nicole Eggert

198-1

198-2

198-3

198-1
cont'd

198-4

198-1 DOE acknowledges your concern regarding offsite contamination and health effects at SSFL. Please refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information on these subjects.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of the EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the environment and the health and safety of the public.

DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

198-2 DOE acknowledges your preference for a full cleanup of the site and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used

Commenter No. 198 (cont'd): Nicole Eggert

for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors (refer also to Section 2.5, "Toxicity of Soil Contaminants," of this CRD). Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

- 198-3** Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, this EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

- 198-4** DOE takes its cleanup and financial management responsibility quite seriously. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. Because the AOC cleanup is not the normal way DOE, EPA, or California DTSC performs soil cleanups, DOE evaluated the costs and benefits of the AOC cleanup versus what is normally done (that is, a cleanup that is based on risk and future land use). That analysis demonstrated that the AOC cleanup would be much more expensive and with minimal additional protection of public health and the environment. Please see Section 2.7, "Offsite Impacts," Section 2.8, "Cancer and Other Illnesses Near SSFL," and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for additional information. DOE also refers you to Chapter

Commenter No. 198 (cont'd): Nicole Eggert

3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 199: Amanda Nielsen

I want a study done! I have three beautiful babies and I think it's a complete crime that there has been nothing done to clean this up and protect our families!

Amanda Nielsen

199-1

199-1

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Over the life of SSFL, there has been action taken to clean up the site. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of the EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 200: Arielle Moss

Please as a mother & member of this community, please clean this mess up!

Arielle Moss

|| 200-1

200-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate cleanup alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 201: Anonymous

The Santa Susana field lab meltdown site must be cleaned properly, we cannot continue to put our community at risk.

Anonymous

201-1

201-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate cleanup alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Commenter No. 202: Lindsay

Let's get this cleaned up so these little kids do not have to suffer with getting cancer

Lindsay

202-1

202-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate cleanup alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 203: Rachel Guettler

I live in the Santa Susana/Simi Valley area, and I have a newborn. We purchased our home in 2014. I am beside myself with concern about this area. Clean up needs to happen now and it needs to be safe. We have heavy winds and heavy rains. I am horrified as I have seen several childhood cancer cases in our area. Please make this area a top priority for clean up as soon as possible. The public health risk is very serious. Please take human life seriously! Please make this a priority for our children, our community, and our health. The delay has been long enough. This is a serious state, national, and city level issue.

Rachel Guettler

|| 203-1
203-2
203-1 cont'd
203-2 cont'd
203-1 cont'd
203-2 cont'd

- 203-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE is also concerned with public risk and is preparing this EIS to evaluate alternatives for completing cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.
- 203-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 204: Debbie Smith

Leaving contaminants on site is not acceptable and is putting everyone at risk. A full clean up is in order at their expense. Using scare tactics to make us think the site migration is more dangerous is not acceptable.

Debbie Smith

204-1

204-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

204-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC (including for radioactive constituents) using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

204-2

DOE’s intent is not to alarm people, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) (referred to as migration in the comment) that would be required. The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs between alternatives. In the case of soil remediation and using the Conservation of Natural Resources (Open Space Scenario) Alternative as an example, leaving soil containing low concentrations of chemicals and/or radionuclides on site reduces the number of truck trips from the site. But, removing soil with low concentrations of chemicals or radionuclides, as would be the case under the Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site. Under any of the soil remediation action alternatives and scenarios, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment (see Chapter 4, Section 4.9 of this EIS). This EIS also shows that the transportation risks are very small; Chapter 4, Section 4.8.1, and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 205: Rachel Guettler

I wanted to add another comment, which is that I believe that the DOE is responsible for cleaning this up immediately and leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, is completely not acceptable.

Rachel Guettler

205-1

205-1 DOE acknowledges that it is responsible for the cleanup of area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

205-2

Also, please see Section 2.1, “Preferences for Cleanup,” of this CRD which addresses steps that must be complete before cleanup can resume.

205-3

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

205-2

Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas,

Commenter No. 205 (cont'd): Rachel Guettler

including traffic, human health, cultural and biological resources, socioeconomic, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this EIS provide details of the transportation risk analysis.

- 205-3 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 206: Sophie

How many more children need to die, before you get this site cleaned up!!! I am absolutely disgusted by this. Clean i my up!

Sophie

|| 206-1

206-1

DOE acknowledges your comment and refers you to Section 2.7, “Offsite Impact,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of the EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 207: Ricki Frost

Please do the right thing and properly clean up this mess! The environment, residents and our future children deserve nothing less!!!

Ricki Frost

|| 207-1

207-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 208: Melissa Patao

As a mother with a two year old son, hearing the multiple stories of children with cancer who live within twenty miles of the nuclear spill site is devastating. How can we in good conscience let this continue to happen and allow these children to die? Would you live near this site with your children? Please consider the answer to that question, and please take action as quickly as possible to clean this site.

Melissa Patao

208-1

208-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

208-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

208-2

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD(s) pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]).

Commenter No. 208 (cont'd): Melissa Patao

DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conformed the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 209: Julie Cimity

Leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, not acceptable. I live on the other side of the mountain and have 2 children. This isn't something to be ignored. Remove the contaminants immediately.

Julie Cimity

|| 209-1

|| 209-2

|| 209-3

|| 209-1
cont'd

209-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

209-2 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/

Commenter No. 209 (cont'd): Julie Cimity

or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

- 209-3** DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. Please also refer to Chapter 3, Section 3.9.5, of this EIS, which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 210: Julie Klausmeier

Please stop killing the innocent with the disastrous consequences of your science experiments gone awry. Clean up the environmental toxins that are left behind.

Julie Klausmeier

210-1

210-1

Each of the action alternatives evaluated in this EIS is protective of the environment and the health and safety of the public. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 211: Amy Greer

Please, please, please move forward with a full environmental clean up of the Santa Susana Field Lab. My family moved to Moorpark in the early 80's when I was very young. Nobody on either side of my family had any history of thyroid issues. When I was 16 my father had to have his entire thyroid removed due to cancerous cells. I'm now 39 years old and had to have half of my thyroid removed due to precancerous cells in 2010. And most recently my mother had to have half of her thyroid removed as well. My sister suffers from Hashimotos. All four of us living under one roof in Moorpark have had thyroid issues that nobody else in our family has had. That is way more than a coincidence. Now here we are in 2017 and I'm pregnant with my second child, living in Moorpark. I want this to be a safe place for my children to grow up not just due to low crime rates and good public education options. I want their health to be protected! It's unacceptable that a full clean up has not already occurred and that new homes are allowed to be built just down the hill from the horrendous and toxic nuclear spill. Please do the right thing and clean it up!

Amy Greer

211-1

211-1 DOE acknowledges your concern about achieving a full environmental cleanup up of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

211-2

211-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding contamination in the area and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

211-1
cont'd

DOE notes that a lot of cleanup has occurred at SSFL. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 212: Margit Barre

This needs to somehow be cleaned up. We are hearing about too many children who are getting cancer living bear this area. Please

Margit Barre

|| 212-1

212-1 DOE agrees that Area IV and the NBZ need to be cleaned up. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

DOE acknowledges your concern about cancer in the area and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 213: Anonymous

Leaving contaminants on site is not acceptable. This is terrifying to anyone who lives within 20 miles of the contamination site and a full clean up MUST be done. There have been extremely rare forms of cancer that have affected 30+ kids who live within this area. It is not a coincidence. I am scared for my children and so many others feel the same way. We BEG you to please consider a FULL CLEAN UP of the SSFL Area IV so that our community can thrive and not be threatened by the exposure of these harmful contaminants any longer.

Anonymous

213-1

213-2

213-1
cont'd

213-1 DOE acknowledges your preference for a full cleanup of SSFL, please see Section 2.1 “Preferences for Cleanup,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

213-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 214: Melissa Adrian

PLEASE CLEAN THIS UP. WE AS OUR SIMI VALLEY, THOUSAND OAKS, WESTLAKE VILLAGE, & ALL VENTURA COUNTY want our environment clean. This leak has caused so many RARE DISEASES on so many innocent people especially children.

Melissa Adrian

|| 214-1

214-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

|| 214-2

214-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. Please refer Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 215: Anonymous

Leaving contaminants on site is not acceptable. Please consider a FULL CLEAN UP of the SSFL Area IV.

Anonymous

|| 215-1

215-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 216: Ashley Rose

I want a full site cleanup.

Ashley Rose

|| 216-1

216-1 DOE acknowledges your concern about achieving a full site cleanup. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 217: Anonymous

There have been way too many rare cases of cancer within the radius of this spill. This is a priority to the health of many people. If you care about the health of the people in the surrounding area than this MUST be cleaned up! Too many young children are suffering because of this, and I know many many families who will be picking up and moving elsewhere if this is not cleaned up and done as promised, our family included. To put the lives of people at risk to save money is ridiculous.

Anonymous

217-1

217-1

DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE notes that a lot of cleanup has occurred at SSFL. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 218: Elizabeth Gordon

You guys know very well many people have come down with various types of Cancer. Your solution has been a bandage to the problem and you guys know very well that the money to clean up that mess is what you will not spend !!!!

Elizabeth Gordon

|| 218-1
|| 218-2

- 218-1 DOE acknowledges your concern about health issues in the area and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 218-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Committer No. 219: Ashlee Shewell

I am a resident of Simi Valley raising 3 young boys with my husband. When we first moved to Simi Valley almost 7 years ago we came across this horrible story that we still have toxic waste in the hills from a toxic nuclear meltdown many years ago. This toxic waste should not still be here. We need to have a full clean up. The cities surrounding this land are full of families raising children. This is a health risk especially to children. This is not acceptable. Please clean this waste up! We can't have this being a risk to our children.

Ashlee Shewell

219-1

219-1

DOE acknowledges your concern about cleanup of SSFL and refers you to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV" of this CRD to get a better understanding of the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing).

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information

219-2

219-2

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE's purpose in preparing this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in a cleanup of Area IV and the NBZ that is protective of public health and safety and the environment.

Commenter No. 220: Leah Oviedo

To Who it May Concern- I am a local resident and I am asking for a full clean up of the site. In my research I have found many children battling rare cancers and all live in the surrounding areas. I am in fear my children or family could be affected due to the site not being cleaned up. This situation reminds me of the case with PG & E and the case Erin Brochivch won. I pray you do the right thing for these families and the community, for everyone's safety and well being. These poor families that have to suffer due to the lack of a full clean up in the area. I request a full clean up so we can all live without being in fear.

Thank you!

Leah Oviedo

220-1

220-1

DOE acknowledges your concern about achieving a full cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

220-2

220-2

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

220-1 cont'd

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 221: Alison McLane

Please remediate radiologically and chemically impacted soil and groundwater, dispose of the resulting waste, and restore the affected environment in the fastest, most thorough fashion necessary.

Alison McLane

221-1

221-1

DOE acknowledges your concern about conducting site remediation, waste disposal, and environmental restoration in a rapid and thorough fashion. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 222: Sara Ahl

The Santa Susana Field Laboratory needs more testing and more cleanup! Too many cancer cases in the area should be enough reason to protect the public!

Sara Ahl

|| 222-1
|| 222-2

222-1 DOE has extensive knowledge of the types, locations, and concentrations of both radiological and chemical contaminants in Area IV and the NBZ of the SSFL. This knowledge derives from the years of environmental sampling conducted at the site by DOE, EPA, and others, resulting in SSFL possibly being one of the most tested of any cleanup site in the country (number of samples per acre). For example, EPA completed its latest radiological characterization study at SSFL in 2012, for which EPA tested a total of 3,735 soil and sediment samples and 215 groundwater and surface water samples. EPA described this study as “one of the most comprehensive technical investigations every undertaken for low-level radioactive contamination” (EPA 2012).

DOE acknowledges your support for additional cleanup of SSFL. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

222-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 223: Kelsey Jordan

As a resident of Simi Valley, I want all of the waste cleaned up! This is such a great place to live and raise a family, but if living here means I am poisoning my child and giving her higher odds of getting a disease like cancer that is life threatening, it is not worth putting her life in danger. We want it cleaned!

Kelsey Jordan

|| 223-1
|| 223-2

223-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

223-2 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

DOE acknowledges your concern about cancer in the area and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 224: Anonymous

Full site cleanup is needed. Community education and awareness of associated health issues is also needed.

Anonymous

- || 224-1
- || 224-2

- 224-1 DOE acknowledges your support for full site cleanup. DOE’s purpose in preparing the EIS is to evaluate alternatives for those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.
- 224-2 DOE remains committed to communication of health issues to the community through the NEPA process and through public information meetings, the CleanUpdate newsletter, and the Energy Technology Engineering Center website.

Commenter No. 225: Heather Farrell

You MUST fully clean up the old Rockydyne Site. We will. It rest until you do. People are sick, our kids are sick and dying. You have contaminates our city, our soil, our wind, and our water. Please help us

Heather Farrell

|| 225-1
|| 225-2

225-1 DOE acknowledges your concern about full cleanup of the old Rocketdyne site; however, please note that DOE's purpose in preparing the EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ; cleanups of other portions of SSFL are the responsibilities of NASA and Boeing. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

225-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD for a discussion about commenters' concerns about dispersion of contamination from SSFL, as well as Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE's purpose in preparing this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 226: Jyl Fearn

Please do not allow contamination to remain on the site. Please protect our community in anyway necessary, including proper waste cleanup and management necessary. You will affect more than your pocket book. Generations to come can be saved by the action taken now.

Jyl Fearn

226-1

226-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

226-2

The purpose of this Final EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

226-2

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 227: Maria C. Rodriguez

You asked for COMMENTS...Well here they are. For years now we have attended meetings for plans to remove the toxic deposits from the Santa Susana Mountain area. Bad enough they covered up the meltdown back in the 50's. So much babble is exchanged and nothing is DONE>NOTHING. Plans don't clean up a mess. ACTION DOES. I had cancer in 2005 and people continue to get cancer within the area range effected. I have lived in Canoga Park/West Hills for 35 years. ENOUGH TALK.GET THE MESS CLEANED UP. MOVE THOSE TRUCKS THROUGH THE CANYONS. MAKE A NEW ROAD IF YOU HAVE TO BUT GET THAT MESS CLEANED UP BEFORE MORE PEOPLE DIE.

Maria C. Rodriguez

227-1

227-1 DOE prepared this EIS as a necessary step towards continued cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Prior to the cleanup evaluated in this EIS, there has been much cleanup previously conducted in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Also, please refer to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of steps necessary prior to resuming cleanup activities.

227-2

Regarding the statement that there was a cover up of a meltdown in the 1950s, DOE has not kept the SRE accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atomics International 1959). The accident was also described in detail in a reactor safety textbook, "The Technology of Nuclear Reactor Safety" published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html.

227-3

227-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

227-3 DOE acknowledges your concerns about cleanup of SSFL and the death of people in the SSFL vicinity. Please refer to Sections 2.1, "Preferences for Cleanup," and 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussions of these topics and DOE responses. Also, please see Chapter 3, Section 3.9.5 of this EIS, which summarizes several public health studies and worker health studies at SSFL and presents cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

Please also refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 228: Anonymous

How many more people are going to have to suffer and die before something is done? My mother was diagnosed last year with a very rare type of uterian sarcoma..... a Thousand Oaks resident for 40 years. I now have two children aged 5 and 2. The thought of them being diagnosed with a late stage, incurable cancer because of something that could have been dealt with and SHOULD HAVE been dealt with by now, is more than I can bear. It should be more than you can bear. Clear those toxins from our community. Make this a priority. What is of higher priority than the health of our children?

Anonymous

228-1

228-1 DOE acknowledges your concern about cleanup of SSFL and refers you to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV" of this CRD to get a better understanding of the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE notes that a lot of cleanup has occurred at SSFL. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing).

228-2

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

228-2

228-2 DOE acknowledges your concern about clearing toxins from the community. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, "Cancer and other Illnesses near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or

Commenter No. 228 (cont'd): Anonymous

otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 229: Jennifer Mayo

Please clean up this site thoroughly. Please don't let more people get sick. This area is known to get very windy during Santa Susana winds, and the containment of the contaminants can scatter quickly.

Jennifer Mayo

|| 229-1
|| 229-2

229-1 DOE acknowledges your concern about thorough site cleanup. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

229-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 230: Chelsea Hill

I would like to voice that I'd like the site to be cleaned as promised by the DOE. We just moved to Simi and I am currently pregnant and have a 19 month old daughter. Thank you.

Chelsea Hill

230-1

230-1

DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information, including necessary steps prior to continuing cleanup. The purpose of the EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 231: Anonymous

My family and I live in the area and are extremely concerned about the left toxins and what potentially fatal effects they could have on our young child. I would like to request a full clean up so we can live without fear of any harmful consequences.

Anonymous

|| 231-1

231-1 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

|| 231-2

231-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 232: Anonymous

Please complete a full clean up the Santa Susana Field Lab. Leaving contaminants onsite is not acceptable. Research should also be done to look into how it is harming people. Thank you!!

Anonymous

|| 232-1
|| 232-2

232-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

232-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” and 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes several public health studies and worker health studies at SSFL and presents cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties. DOE’s purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated are protective of the environment and the health and safety of the public.

Commenter No. 233: Susie DiGrigoli

A full cleanup of this site needs to happen. My life and family's life have been affected by health issues due to this site. My son also is growing up in the area. We need to protect this beautiful community.

Susie DiGrigoli

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|| 233-2

233-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

233-2 DOE acknowledges your concern and refers you to CRD Section 2.7, "Offsite Impacts," regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL" for further discussion of illnesses in the vicinity of SSFL. Available data and the modeling performed for this Final EIS (see Chapter 4, Section 4.9) indicate that it is safe to live near SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 234: Nancy Ann Schroeder

You must clean up the Simi Valley Santa Susana nuclear reactor meltdown site. I have had lymphoma cancer in my eyes and eyelids. I learned about the site from a fellow patient in the waiting room of my oncologist's office. I am older, but seeing these children suffering from the cancers is heartbreaking and wrong.

Nancy Ann Schroeder

|| 234-1

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234-1 DOE acknowledges your concern about cleanup of the SSFL nuclear reactor meltdown site. The nuclear reactors that operated at SSFL were located in Area IV of SSFL; DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

234-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. DOE refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 235: Sarah Holmes

My daughter lives in simi half of the month and I very concerned for her welfare due to what I have read about the cleanup and how they will not be going forward. This is unacceptable we have children's life's to think about and there should be no other outcome but the sure cleaned up 100%

Sarah Holmes

235-1

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

235-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. DOE proposes to proceed with cleanup in accordance with the alternative selected following this EIS and the DTSC's Program Environmental Impact Report, which is evaluating cleanup of the entire SSFL. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

235-2

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options

Commenter No. 235 (cont'd): Sarah Holmes

for cleanup of Area IV and the NBZ. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. This section discusses the alternative that incorporates the technical elements of the 2010 AOC. None of the action alternatives leaves concentrations of chemicals or radionuclides that are dangerous for the intended use of the site as open space.

Commenter No. 236: Julie Kester

As a local citizen, mother & registered nurse I urge you to do the proper clean up of Santa Susana field lab. I remember during my oncology training in nursing school that we learned of the impact and direct cause that environmental toxins have on developing cancer... especially for our young children. We are all “down steam” from these toxins. I am 15 miles away which may sound like a lot but it isn’t. Young children have already died who have obtained cancer from this known area. It’s not okay to do nothing. The ONLY thing that is right to do is to properly clean up the toxins...for the sake of our entire community. It truly is a public health concern Thank you

Julie Kester

236-1

236-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

236-2

236-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD for a discussion about dispersion of contamination from SSFL, as well as Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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cont’d

Commenter No. 237: Meridith Jones

I am ashamed with the DOE and its broken commitment to the local community regarding the Santa Susana field lab cleanup. As a mother of an infant, with many of my friends and family in this area, it is extremely upsetting that the DOE has turned its back on the environment and community surrounding this hazardous area. I challenge the DOE to keep its promise to clean the soil beyond federal standards as was agreed and for the health and wellness of human and environmental life.

Meridith Jones

237-1

237-1

In this EIS, DOE does not propose to breach the 2010 AOC signed with its regulator, DTSC. However NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation, this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 238: Laura Aguero

We've found 30 other children with rare cancers who live within 20 miles of the site. No study has been done on childhood cancers related to the site. We want answers, and we want a full cleanup. Leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, is completely not acceptable.

Laura Aguero

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238-3

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cont'd

238-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

238-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

238-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS

Commenter No. 238 (cont'd): Laura Agüero

evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. This Final EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 239: Ashlee

Please clean up this mess!! It's so dangerous for the environment and our health. To many people have already been effected.

Ashlee

|| 239-1
|| 239-2

- 239-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.
- 239-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 240: Nicole Grossman

Leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, is completely not acceptable.

Nicole Grossman

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||| 240-3

240-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC regarding cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

240-2 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE’s intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. This Final EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

240-3 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity

Commenter No. 240 (cont'd): Nicole Grossman

of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of the studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this Final EIS.

Commenter No. 241: Cassandra Moreno

The clean up needs to be done, this has gone on for far too long.
Cassandra Moreno

|| 241-1

241-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in September 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 242: Sloan Rawls

The Santa Susana (SSFL) area is so obviously a cause for health concerns. There are many cases of people dying or getting cancer in the areas of Woodland Hills below it and Simi Valley above it. To deny that is to deny the facts and the dignity of the victims of this sloppy cover-up!!! Children are especially susceptible to toxins and I personally know a child who is a victim of this shameful catastrophe. How can anyone justify leaving toxic nuclear waste to poison and contaminate people and surrounding areas for decades?????? Please, please someone take responsibility or at least be gracious and caring enough to help our community and finally take care of this!! It's been going on long enough. Bureaucracy on this is causing people, children, INFANTS to be gravely ill and die!! Please. Help.

Sloan Rawls

242-1

242-1

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of what is known about illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

242-1

242-1
cont'd

DOE's purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. All of the action alternatives evaluated for cleanup of Area IV and the NBZ in this Final EIS are protective of the health and safety of the public and the environment.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

242-2

DOE acknowledges your concern about cleanup of toxic nuclear waste. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 242 (cont'd): Sloan Rawls

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 243: Jill Elsemore

I previously lived in Simi Valley and currently reside in the surrounding area. The unusual cancers and infirmities in the area are very concerning, particularly the children. Please complete a thorough testing that include dangers specific to babies and children. We are watching and waiting.

Jill Elsemore

243-1

243-1

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding data on contamination in the area around SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this Final EIS.

Commenter No. 244: Melissa Pringle

Being born and raised in Simi Valley I am very concerned about this. There are more and more extremely rare diseases being diagnosed in our area. Please do something about this!!!

Melissa Pringle

244-1

244-1 DOE acknowledges your concern and refers you to CRD Section 2.7, “Offsite Impacts,” regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL” for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 245: Tiffany

Clean up this horrible toxic waste area! You are a major factor on children getting sick their little lives are in your hands!

Tiffany

- || 245-1
- || 245-2

245-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

245-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 246: Tonantzin Bolaños

Person Unacceptable! Clean up the waste in simi!
Tonantzin Bolaños

|| 246-1

246-1 DOE acknowledges your concern about cleanup of waste. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 247: Lorraine Kollman

We want a full clean up of the area as promised so that our kids do not grow up with toxins, because the risk is real.

Lorraine Kollman

|| 247-1

247-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

Each of the action alternatives evaluated in this EIS is protective of the environment and the health and safety of the public. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites.

DOE acknowledges your concern about health risks and refers you to CRD Section 2.8, “Cancer and Other Illnesses Near SSFL” for further discussion of illnesses in the vicinity of SSFL. Also, please see Chapter 3, Section 3.9.5 of this EIS, which summarizes several public health studies and worker health studies at SSFL and presents cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

Commenter No. 248: Anonymous

The Santa Susana pass where the nuclear dumping occurred must be cleaned. We live in the 21st century where we know the dangers that can occur. Why would you risk our children our future!? Every life matters and no child should suffer because a mistake occurred. Please clean this area and please do research on what the long term effects are. If extreme measures need to be taken please do so! This could be your child!

Anonymous

|| 248-1

|| 248-2

248-1 DOE acknowledges your concern about cleanup of SSFL and assumes that you are referring to cleanup of SSFL Area IV. DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

248-2 DOE acknowledges your concern regarding health issues and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL” for further discussion of illnesses in the vicinity of SSFL. Also, please see Chapter 3, Section 3.9.5 of this EIS, which summarizes several public health studies and worker health studies at SSFL and presents cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this Final EIS.

Commenter No. 249: Elisa Cordova

Please follow through on your promise to COMPLETELY clean up the Santa Susana Field Lab spill this quarter. We have a small baby boy and am currently pregnant with a baby girl. My husband and I just purchased a newly constructed home in Simi Valley that will be ready in April, but we are considering backing out of the home if this issue is not resolved. We will NOT risk our families health if this issue is not corrected. It is terrible that Simi Valley residents live in fear of major disease including cancer may happen to themselves or our kids. We can't keep living with this question of risk hanging over our heads. Please clean up the leak completely! It is urgent and important! Thank you.

Elisa Cordova

|| 249-1

|| 249-2

|| 249-1
cont'd

249-1 DOE acknowledges your preference for a full cleanup of SSFL. DOE remains committed to cleaning up Area IV and the NBZ in a manner that is protective of human health and the environment. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including information on the necessary steps necessary prior to DOE making a decision on alternatives for cleanup of Area IV and the NBZ. Section 2.2, specifically addresses cleanup in accordance with the 2010 AOC.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3 of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision (ROD) pursuant to NEPA. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (a draft of the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017[DTSC 2017b]) under CEQA that applies to cleanup of the entire SSFL. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

249-2 DOE acknowledges your concern regarding health issues and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of these topics. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 250: Dawn Cushway

A full clean-up needs to be done in a timely manner with measures put in place on how futures procedures should be maintained to prevent exposure of harmful chemicals to surrounding populations! In retrospect, a survey of how this environment has impacted the children who have been diagnosed with cancer and other health issues, including respiratory illnesses, learning and processing impacts and neurological and developmental issues. What is being done to prevent contamination from spreading in winds and rains? What is this potentially doing to our soil? This toxicity ends up in our food and water and the air we breathe. Do the right thing!

Dawn Cushway

250-1

250-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

250-2

250-3

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3 of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision (ROD) pursuant to NEPA. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (a draft of the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017[DTSC 2017b]) under CEQA that applies to cleanup of the entire SSFL. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

250-2

250-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of these topics. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

250-3

250-3 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 251: Anonymous

For the sake of the communities health and lives clean up these toxic sites!!! This is unacceptable!

Anonymous

|| 251-1

251-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 252: Anonymous

Neuroblastoma. Rare forms of childhood leukemia. Death. Affected families. Tortured lives. Poisoned soil and water. How much longer can the citizens living near the SSFL continue to suffer through the decades while the cleanup is thwarted by officials operating like puppets under the pocketbook of Boeing? The stringent remediation to standards set out in SB990 should never have been fought or deemed unjust. When you have NUCLEAR WASTE at stake, how can a corporation or a city government even call into question issues about how to cleanup the situation... It's all about the money and how deep it cuts you. Well, if only the parents of the 30+ kids with RARE forms of cancer living within the 20 mile radius (and there very well are more cases of cancer of all ages and species- yup, pets!) could afford what Boeing, the DOE and city officials who have denied the stringent cleanup could afford. What about their tax paying dollars? What about their hospital bills, suffering, and faces of death? This is absolutely absurd that it comes down to "leave a comment about this draft." This should've been taken care of decades ago and NEVER COVERED UP. What a tragedy... To officials, to Boeing, to anyone reading this...Just because it's not in YOUR backyard, it doesn't make it right to continue to toxify the area and its inhabitants by not picking up after the horrific nuclear meltdown mess. I'm 200% certain that if you were breathing the toxins from nuclear waste daily in your cushy offices in downtown with fear of your testes shrinking, you'd have made a difference by now...

Anonymous

252-1

252-1

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

252-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

252-1
cont'd

252-2
cont'd

252-2

DOE remains committed to cleaning up Area IV and the NBZ in a manner that is protective of human health and the environment. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information, including information on the necessary steps necessary prior to DOE making a decision on alternatives for cleanup of Area IV and the NBZ. Section 2.2, specifically addresses cleanup in accordance with the 2010 AOC (DOE compliance with SB 990 is identified in Section 1.6 of the 2010 AOC). As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. (The draft *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in September 2017 [DTSC 2017b].) DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2)

Commenter No. 252 (cont'd): Anonymous

DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 253: Kim Harter

Please clean up this area for the sake of our children and their futures. I grew up in the Thousand Oaks/Moorpark/Simi Valley area and as a person with an autoimmune disease, I know how toxic the environment is and how it contributes to lots of diseases and complications. This hazardous, toxic pollution must be taken care of.

Kim Harter

|| 253-1

|| 253-2

253-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

253-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 254: Anonymous

Clean up this mess! Too many people have suffered!

Anonymous

|| 254-1

254-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 255: Cassandra Niehaus

As a mother concerned with the safety of my young children, I would like this site to be completely cleaned up and tested. There have been many reports of child cancer in and around this area and I believe an investigation needs to be conducted. We need to have a clear understanding of the impact and damage this has to the community.

Cassandra Niehaus

255-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

255-2

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

255-2

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of these topics. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 256: Alexia Liavas

It is a basic human right to live in an environment free of toxins that is safe. The Santa Susana's Field Laboratory toxins are responsible for numerous deaths and illnesses. Action needs to be taken immediately to make it safe again for the local residents and those living up to 20 miles away. Please take action immediately before more death is on your hands.

Alexia Liavas

|| 256-1

|| 256-2

|| 256-1 cont'd

256-1 DOE acknowledges your concern about toxins in the environment and the need to take action. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (Program EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in September 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

256-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of these topics. Available data and the modeling (found in Chapter 4, Section 4.9) performed for this Final EIS indicate that it is safe to live near SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and

Commenter No. 256 (cont'd): Alexia Liavas

workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 257: Alexia Liavas

Your automated response to my comment was: DOE will consider your comments during the preparation of the Final EIS for Remediation of Area IV and the NBZ of the SSFL, which is scheduled for completion in late 2016. DOE will issue a Record of Decision (ROD) in early 2017. Is this a joke? Has the final remediation that was “scheduled for the end of 2016” even been addressed? What is the “record of decision” that was supposed to be issued in early 2017?

Alexia Liavas

257-1

257-1

DOE apologizes for any confusion caused by the automated response and thanks you for notifying us that is was out of date. The response was revised to reflect the projected timing for finalizing the EIS and issuing a Record of Decision.

Commenter No. 258: Anonymous

I grew up in West Hills and recently moved back as an adult. I now have a daughter who is 4 months old, and I am worried for her health and safety. Please remove the contaminants from the area!!

|| 258-1

|| 258-2

Anonymous

258-1 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of these topics. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

258-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 259: Jill Marshall

I have personally known people who have had cancer and most of them lived on the East side of town and that was in the 70's and 80's. It is very sad that today we are still seeing cancers in the same areas. I hope and pray that you will do the right thing and clean up the area correctly so that no other family has to go through losing a loved one especially a child.

Jill Marshall



259-1

259-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

259-2

259-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 260: Elaine

We (us and our children) deserve a full clesn-up of all contamination!!!!!!!!'n

Elaine

|| 260-1

260-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 261: Lindsey McGeorge

Please clean up our city!! Our babies deserve it!

Lindsey McGeorge

|| 261-1

261-1

Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 262: Bonni Tromello, Crossroads in Health

My daughter in law grew up on the East end of Simi Valley, California. Last year she was diagnosed with a rare tumor on her submandibular salivary gland. I have been a Nurse Practitioner for 22 years, and a Nurse for 38 years. In that time I have only seen two such tumors. I have unfortunately seen numerous cases of lymphoma, breast and thyroid cancers in people living in the vicinity of the Santa Susana Field Laboratory. It has become part of my routine health history intake to assess if people have lived nearby. I urge that this area receive the cleanup it deserves, and this great problem not be swept under the rug yet again.

Bonni Tromello
Crossroads In Health

262-1

262-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

262-2

262-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 263: Lauren Chapman

I live in Simi Valley and have 3 young boys. They are 5, 2 and 1. I would be devastated if something happened to them. I would like a clean up of the affected area.

Lauren Chapman

|| 263-1
|| 263-2

- 263-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9, of this Final EIS) indicated that it is safe to live near SSFL.
- 263-2 DOE acknowledges your concern about cleanup of the affected area. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Committer No. 264: Sara Fonacier

I grew up in Simi Valley and now live here again with my son and one more on the way. I see no reason why there should not be a full cleanup of the site. The rate of childhood cancers in the area is horrifying and if this could be the cause of even one child's disease it needs to be addressed fully.

Sara Fonacier

||| 264-1

264-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

||| 264-2

264-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 265: Anonymous

Please clean up the site as promised back in 2010.

Anonymous

|| 265-1

265-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 266: Anonymous

You are causing our children cancer and deathly harm...you selfish ba starts. Clean up your contamination this is not ok. You are killing our children. May you rot in hell for eternity.

Anonymous

|| 266-1
|| 266-2

- 266-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 266-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 267: Ryann Moresi

We have friends who have children battling cancer. Please do a full clean up of this area and all contaminants that we believe is related to these conditions.

Ryann Moresi

|| 267-1
|| 267-2

267-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

267-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 268: Elyse Ryan

The fact that I personally know parents with children dying of rare forms of cancer within miles of my home with my babies living here is beyond frightening. Our babies breathe this air, drink this water, and play in this soil. We MUST care for our children and their future, or what will be left for their children? I am writing to beg the DOE to completely clean up the contaminants left over. There are too many cases of rare cancer in our children within this area. It is absolutely unacceptable. Please take back your humanity, and make the decision with you hearts.

Elyse Ryan
1981

268-1

268-1

DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

268-2

268-2

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

268-1
cont'd

Commenter No. 269: Rina Nehdar

There are cancer clusters of children and adults in Oak Park, CA that seem to be a direct cause of the nuclear waste being spread by the winds from the SSL site. We have lost people who are dear to us and it's insane that the company responsible for this contamination isn't paying to clean it up. How many more people that we love must we lose? It won't stop until the clean up happens. Please help!

Rina Nehdar

269-1

DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concerns about airborne dispersion of contaminants from SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

269-2

DOE acknowledges your concern about cleanup of the contamination. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Appendix K of the EIS includes a cost-benefit analysis of remediation of SSFL Area IV and the NBZ. Cost will be one of the factors considered by DOE when reaching a decision on Area IV and NBZ that will be announced in the *Federal Register* after publication of this Final EIS. Decisions on payment for SSFL remediation will be made in accordance with Federal and State statute and are outside the scope of the EIS.

Commenter No. 270: Anonymous

The Santa Susanna area needs to be cleaned up and cleaned up in the safest way. I am one of the original cancer patients that was linked to the 1989 contamination of Simi Valley. Both my sister and I were diagnosed with thyroid cancer due to growing up in Simi. Diagnosed 3 months apart from each other. My sister has had multiple recurrences of thyroid cancer. I was fortunate that mine didn't come back. But now due to getting cancer we are at high risk for other cancers and other health issues due to the contaminants that Santa Susanna did to our home town. We do have other health issues that have been linked back to the junk we were exposed to as innocent children. No child or adult should have to go through having cancer because of the irresponsibility that Santa Susanna did. They contaminated the water, soil and air over Simi and surrounding areas. Innocent children shouldn't have to pay for this. Do the responsible thing and clean up the area. There has to be a safe way to clean up the area to prevent continued contamination of radioactive contaminants leaking into the valley and still hurting people. I didn't fight for years in the original civil lawsuit to have Santa Susanna still getting away with not cleaning up their mess.

Anonymous

270-1

270-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding your concern about cleanup in the safest way, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

270-2

270-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

270-3

270-3 DOE acknowledges your concern about cleanup of the area. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Sections 2.7, "Offsite Impacts," and 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD.

Commenter No. 271: Eva Soria

It is imperative that DOE act on a FULL clean up of that toxic Santa susana site. The health and safety of the children and people in the surrounding communities are in your hands. Why allow more children to suffer from the toxins in their environment? Why are so many in such a small area getting cancer? Rare forms of cancer? You cannot deny the two are not connected. Take responsibility and do what is right.

Eva Soria

|| 271-1
||
271-2

- 271-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 271-2 DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding your concern about toxins in the environment, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 272: Jeannine Kowal

The Santa Susana site has been ignored too long. People need and deserve real remedial measures immediately. Just as the rate of cancer increased in Burbank when Lockheed decided to “clean” its ware by burning it into the air, Santa Susana’s ramifications continue to worsen the environment around it by leaching and other known methods of spreading the contamination. There can be no doubt the ramifications to our children and families will be unbearable. Do your jobs and protect the families being effected by the Santa Susana aftermath.

Jeannine Kowal

272-1

272-1 DOE acknowledges your concern about achieving remedial measures at SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

272-2

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DDTC approval of DOE-prepared RCRA closure plans for building demolition.

272-2

DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding your concern about dispersion of contaminants from SSFL, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 273: Dayna Ross

I live within 10 miles of this site. My family has grown up in this area and in the San Fernando valley and witnessed multiple unexplained rare forms of cancer affect multiple children and people that live within a mile radius. I also have a 2 year old and feel so disgusted by our government and their blatant disregard for what is happening. This has been going on for TOO LONG. Stop hiding behind lobbyists and political tyranny. Clean this mess up for good. How dare you allow our earth to be contaminated in such a devastating matter. And more importantly how dare you allow our community become ill and DIE from this careless mistake. Make it right.

Dayna Ross

273-1

273-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

273-2

273-1
cont'd

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

273-2

DOE acknowledges your preference for a cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report

Commenter No. 273 (cont'd): Dayna Ross

(EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 274: Laura Sheehan

Leaving contaminants on site is not acceptable. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, is completely not acceptable. There are cancer clusters of children and adults in Oak Park, CA that seem to be a direct cause of the nuclear waste being spread by the winds from the SSL site. It is unfathomable that the company responsible for this contamination isn't paying to clean it up. Clean up needs to happen, and it needs to happen NOW. The responsibility is in your hands, please don't let us down.

Laura Sheehan

274-1

274-1 DOE acknowledges your concerns about cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

274-2

Please also refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

274-3

The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

274-2

DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concerns about airborne dispersion of contaminants from SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 274 (cont'd): Laura Sheehan

274-3 DOE acknowledges your concern about cleanup of the contamination. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Appendix K of this Final EIS includes a cost-benefit analysis of remediation of SSFL Area IV and the NBZ. Cost will be one of the factors considered by DOE when reaching a decision on Area IV and NBZ that will be announced in the *Federal Register* after publication of the Final EIS. Decisions on payment for SSFL remediation will be made in accordance with Federal and State statute and are outside the scope of this EIS.

Commenter No. 275: Sarah Stinson

Clean up this mess!!! You are murdering people! How sick is this. Full clean up, don't be horrible people!!!

Sarah Stinson

|| 275-1

275-1

DOE acknowledges your concern about achieving a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 276: Simina Florea

Hi, Please fully cleanup the Santa Susana Field Lab. Covering it or partially cleaning it up is like applying a bandaid on a broken bone. What will happen in case of a major earthquake? And what about the all those people in the area affected by rare cancer types. Put yourself in those people shoes and see if you still think that partial cleanup is a solution. Thank you,

Simina Florea

276-1

276-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

276-2

The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

276-2

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about a proper cleanup, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE acknowledges that there would be potential risks to site workers in the event of a major earthquake. As addressed in Chapter 4, Section 4.2, of this EIS, risks to workers could occur during soil removal operations in areas where earthquake-induced landslides could occur. Risks to workers during building demolition could occur resulting from building collapse. Risks would be minimal during groundwater remediation operations. The low concentrations of chemicals and radionuclides in Area IV and NBZ soil would not pose an offsite threat as a result of an earthquake.

Commenter No. 277: Stacy M. Barninger

Please properly clean up and remove the waste from this site for the health and safety of the people would live in and around the area. I have two kids under 5 years old and fear for their (and my) long term safety. Thank you,

Stacy M. Barninger

|| 277-1
|| 277-2

277-1 DOE acknowledges your concern about cleanup of SSFL and removal of waste. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

277-2 DOE acknowledges your comment. Please see the response to comment 277-1.

Commenter No. 278: Sheila

I live extremely close to the effected area and just gave birth to my second child whom I was pregnant with while living in the area. My young family lives here and calls this home and now feel unsafe. I want to see this site cleaned up, as had originally been promised, AND a study done within a 20 mile radius of all the cases of childhood cancers occurring - or all cancers for that matter, so we can better understand and be proactive to the health needs of our community and our family. I am an oncology healthcare professional and am disheartened that this has not been cleaned up and is even a discussion. Those making the decision - I would love to know if you would live next door to this area or if you would want your children or grandchildren raised in its backyard. Not all of us have the financial means to pack up and leave and need to be prepared and advocate for this being cleaned up.

Sheila

278-1

278-2

278-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. This Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. The Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would help to meet cleanup objectives by being protective of the environment and health and safety of the public and workers while avoiding some of the technical challenges and potential adverse environmental impacts associated with cleanup to the 2010 AOC LUT values. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. DOE acknowledges that implementation of any alternative would have to be approved by the DTSC.

278-2 DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

Commenter No. 279: Melinda Stern

There are cancer clusters of children and adults in Oak Park, CA that seem to be a direct cause of the nuclear waste being spread by the winds from the SSL site. We have lost people who are dear to us and it's insane that the company responsible for this contamination isn't paying to clean it up. How many more people that we love must we lose? It won't stop until the clean up happens. Please help!

Melinda Stern

279-1

279-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concerns about airborne dispersion of contaminants from SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

There are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of this work. Each of the three parties is financially responsible to remediate the areas where its work was performed.

279-2

279-2 DOE acknowledges your concern about a cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 280: Anonymous

I live in the effected area with my family and young children. I want to see this site cleaned up AND a study done within a 20 mile radius of all the cases of childhood cancers occurring - or all cancers for that matter so we can better understand and be proactive to the health needs of our community'

Anonymous

280-1

280-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

280-2

280-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 281: Megan Cruz

Clean up Santa Susana! I'm begging for a full and complete cleanup. Too many kids I know in the area have been affected. Have a heart. Clean it up.

Megan Cruz

|| 281-1
|| 281-2

281-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

281-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about cleanup of SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 282: Rebecca Newman-Gonchar

To whom it may concern: I have 3 small kids and I'm concerned that there was no study done on the impact of this site or its clean up on the health of kids in the area. We moved to Thousand Oaks about 7 months ago and were surprised to learn about this contaminated site so close to our home, just this weekend. We weren't warned about moving to the area and should have been. Not only is the site soil and buildings contaminated, but who knows what has leaked into the water table, farm lands, or made its way into our communities some other way. I found the EIS summary a little difficult to digest. At 117 pages and with a significant number of referrals to outside documents, values, and agencies, I have to admit I don't feel like the most well-informed community member at this time. However, I can tell you that it sounds like both the no-action plan and the total clean-up plan appear to put my children at risk of inhaling or ingesting contaminated particulates in the air, water, or food... and I can tell you that no where in your report does it talk about how far reaching those particulates may be (so I don't know how far away I need to move to be safe) NOR does it tell me how big an impact the particulates will have on my children's tiny developing bodies (so I can't make an informed decision about their exposure). Here's what I want: 1. I want to know where my kids will be safe from contamination - what's the safe zone? 10-mi radius? 20? 30? I'm 15 miles away... am I safe? 2. I want to know how inhaling or ingesting these particulates will impact my kids - how likely is it that they will develop a rare disease or have learning troubles or suffer some form of cancer? 3. I want the DOE (in a bi-partisan, non-financial way) to take a stand on where the risks outweigh the benefits in terms of cleaning up this land - which option is the best for keeping my little ones safe? 4. I want the land cleaned up to the highest standard that leaves kids (including my own) safe from current or future risk of contamination. I want to be sure my kids and future generations of kids will be safe from harm. And I want it to be done as quickly as possible. You are already missing your 2017 deadline. If you have kids or grandkids or nieces or nephews, take a look at them before making any decisions. What would you want for them? Treat this decision and every decision like it, like what you decide matters to their lives. We are no different because we live here and you do not. Please think about the kids and the future generations of kids. Thank you for your time!

Rebecca Newman-Gonchar

282-1

282-1

282-3

282-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concern about contamination in communities due to SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE acknowledges that there are chemical and radioactive constituents above background levels in parts of that portion of SSFL for which it is responsible, Area IV and the NBZ. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. As discussed in this EIS, NASA and Boeing are remediating those parts of SSFL for which they are responsible.

This Final EIS includes an analysis of the potential for offsite impacts resulting from potential airborne dispersion of contaminants from SSFL during remediation activities (see Chapter 4, Section 4.9, and Appendices G and K, of this Final EIS). Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

282-2 DOE acknowledges your concern about cleanup of SSFL to the highest standard. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which

Commenter No. 282 (cont'd): Rebecca Newman-Gonchar

summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

- 282-3 DOE's local staff lives in the community. DOE considers all commenters concerns and recognizes that for people in the area of SSFL the cleanup is of the highest priority. Many people have spent many years delving into the issues surrounding the SSFL; DOE acknowledges their efforts and their heartfelt concerns.

Commenter No. 283: Dena Garabedian

My 4 1/2 year old daughter was diagnosed with Acute Lymphoblastic Leukemia (ALL) and underwent 2 1/2 years of intense chemotherapy. We live in Westlake Village and I am convinced our proximity to the nuclear meltdown and eventual lack of proper clean up was the direct cause of her illness. This put her life and health in jeopardy for the REST of her life. PLEASE do the proper cleaning of the site and make it a priority so no other children have to incur the wrath of illness. Thank you,

Dena Garabedian

283-1

283-1 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD regarding your concern about cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment. Also see Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

283-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

283-2

DOE acknowledges your concern about a proper cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 284: Anonymous

Requesting FULL CLEAN UP of Santa susana lab for our future generations!!! Please!!!! This needs to be a priority!

Anonymous

284-1

284-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the health and safety of the public and the environment.

Commenter No. 285: Cristina Ruiz

We need a clean up asap of this area (Santa susana) ... how many more cancers have to be diagnosed before anyone acts? I have two children and have had much regret we bought our home here after finding out what a danger this spill has casued. Its notnok.. can't the ones who are deemed responsible be held accountable ? I heard they were and they were able to overturn it... please listen to the citizens who are left here.

Cristina Ruiz

|| 285-1
||
|| 285-2

285-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

285-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about cleanup of SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was

Commenter No. 285 (cont'd): Cristina Ruiz

performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

Commenter No. 286: Cara Strang

Absolutely unacceptable that this site has been left for so long without proper cleanup. The moms in our community will be relentless in lobbying to get this resolved and will fight to bring media attention to expose the harmful effects to our children and community.

Cara Strang

|| 286-1
|| 286-2

- 286-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.
- 286-2 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 287: Danielle Fatemi

Please do a full review and clean up of the Santa Susana Field Site in California. Our health depends on it.

Danielle Fatemi

|| 287-1

287-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 288: Shannon

the area needs to be fully cleaned up. It is no coincidence how much cancer has occurred in the surrounded areas!

Shannon

|| 288-1
|| 288-2

- 288-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 288-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 289: Ashli Morris

It is disgusting that people have the option to make a community healthy and they are trying to get out of it. It wasn't the communities fault that this happened but it is the governments fault that this hasn't been resolved yet. People live in the surrounding area... and the government is supposed to protect its civilians... where is the support? Where is the protection? You made a mess... now clean it up!

Ashli Morris

289-1

289-1

DOE acknowledges your concern about cleanup of SSFL. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS, which summarizes the public health studies that have been performed for the SSFL vicinity, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 290: Anita Vazquez

I believe the DOE should clear up the Santa Susana Field Lab... There are many families who live in the surrounding areas that are being affected by the contaminants. If you lived in the area you too would be concerned and want the best for your family, friends and community. I believe it is in the best interest of everyone to have it cleared up and avoid any future problems that may arise should it be left behind.

Anita Vazquez

|| 290-1
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|| 290-2

290-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

290-2 DOE acknowledges your concern and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup alternatives, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Available data and the modeling performed for this Final EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 291: Charity Chapman

Dear DOE, Please do what's right and clean this area up for our children. We bought our house in this area, with an understanding that we could raise our family in an environmentally safe location. Furthermore, Boeing, NASA (and any other responsible party) owes it to all of Los Angeles to undo the damage they have perpetrated to our soil and water. Please hold to your promise and do the right thing. Sincerely,

Charity Chapman (concerned Mama of two)

|| 291-1
|| 291-2
|| 291-1
|| cont'd

291-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

291-2 Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. Boeing and NASA cleanup activities are only considered as part of cumulative impacts (Chapter 5). Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities, is being evaluated by the DTSC in a program environmental impact report. DTSC issued the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* in September 2017 (DTSC 2017b).

Commenter No. 292: Jill Shaw

Leaving contaminants on site is not acceptable. Please keep our families safe. Using scare tactics to make us think the site migration is more dangerous is not acceptable. Refusing to use less populated roads for the migration, not acceptable. Not having a full survey done of the risk to children in our communities, is completely not acceptable.

Jill Shaw

|| 292-1
|| 292-2
|| 292-3

292-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

292-2 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of transportation topic and DOE’s response.

The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE’s intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of the EIS provide details of the transportation risk analysis.

Commenter No. 292 (cont'd): Jill Shaw

- 292-3 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 293: Anonymous

A full cleanup is needed. The risks are too high, too many people and CHILDREN developing rare cancers. This needs to be taken care of in the most responsible way possible, taking precious human lives into consideration. The cleanup needs to be complete.

Anonymous

|| 293-1
|| 293-2

293-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

293-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about complete cleanup of SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 294: Christina Martinez

I am a resident of Simi Valley, CA, and have now lived here almost 3 years. Until moving here I had not heard about the nuclear meltdown and resulting contamination. When I found out that had happened, it caused extreme worry for me and my family. We have three children. Simi is a family oriented city and thus the site is surrounded by families and children. It is pertinent that the meltdown and contamination is cleaned up FULLY, and QUICKLY. There is no reason why this should have been left this way for this long. The fact that it is causing severe health problems is even more reason for it to be cleaned up fully and now. Please move on this. Do not delay and argue further. Get it cleaned up!

Christina Martinez

294-1

294-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

294-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

294-2

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about complete cleanup of SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this

Commenter No. 294 (cont'd): Christina Martinez

CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 295: Anonymous

This isn't a coincidence. please clean this up!

Anonymous

|| 295-1

295-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 296: Lauren Edson

I would like a full clean-up of the site and a research study done on the health effects people have suffered as a result of the site.

Lauren Edson

|| 296-1

296-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please see Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 297: Alex Groh

I lived in Santa Susana for 10 years and was shocked to hear about the historical cover up of the radioactive contamination, and now the potential failure to clean it up?!?! The DOE needs to do the full clean up of this area. How is it even being considered to do a partial job? Was it not enough that they covered up the melt down and contamination? Now you want to partially clean up the mess. Over 30 children contracted extremely rare kinds of cancer because of the radioactive contamination in this area. These cancers are hardly ever seen in the medical field and yet the majority of the cases they are now seeing are clumped up around this area... definitely seems like an extensive cleanup needs to be done. Especially if the DOE and other responsible agencies and companies want to avoid decades of lawsuits. You have the chance to do it right now. So do it right. The health of our citizens depend on it.

Alex Groh

297-1

297-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

297-2

The purpose of this Final EIS is to evaluate alternatives for completing cleanup of those portions of SSFL for which DOE is responsible. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) It also evaluates two other cleanup alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

**297-1
cont'd**

297-2

DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concern about radioactive contamination in the area and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 298: Stephanie Saxton

I demand a 100% clean up of the contaminated site!
Stephanie Saxton

|| **298-1**

298-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 299: Sasha Holmes

I am a new homeowner to the are of West Hills/Canoga Park that is very close to the SSLA Area. I am also a Mother to two young children that I hope will grow up to be healthy and happy adults. There are so many “what if’s” relating to this clean up, but we are really putting our local families at risk by not completing a full clean up of this site. Would you want your spouses, children and grandchildren to be at risk? I understand the unknowns are there, but why not provide a full clean up so that the unknowns are removed. This is a high priority item that should not be ignored or swept under the run any longer. Thank you for your time and consideration.

Sasha Holmes

299-1

299-1

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about a full cleanup of SSFL and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Also please see Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

299-2

299-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

Commenter No. 300: Johnny Wong

I am a homeowner in one of the most heavily impacted areas, and have grave concerns about my 7 year old daughter getting cancer from being here. I did not understand the disclosure when I purchased my property two years ago, and would not have bought if I had known the severity of the disaster and possible residual effects. It would be extremely ethical for any companies or the government to attempt to cover up the risks just to save money, and I, as I'm sure any impacted families, would look to legal means to recover should we experience any impact from such actions. I think the cost of litigation and negative publicity in the long run would greatly exceed the cost of cleanup. Please return the land to the way it was before the nuclear incident! How would you feel if you lived here and your kids got cancer???

Johnny Wong

300-1

300-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

300-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

300-2

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this

Commenter No. 300 (cont'd): Johnny Wong

CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 301: Anonymous

Requesting a full clean up of the Santa Susana Field Laboratory. I have lived in Simi Valley all of my 41 years and have known many with cancers and autoimmune disorders in the community. I was interviewed by phone for the 2006 UCLA study on the affects of the SSFL and have reviewed the findings along with several other studies and this issue cannot be ignored. The health of the community has been jeopardized far too long and we deserve better.

Anonymous

|| 301-1

|| 301-2

301-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

301-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The studies summarized in Section 3.9.5 include the 2006 study referred to in comment.

Commenter No. 302: Morgan Sanchez

You must clean it up! There are tons of children suffering from rare forms of cancer. Is parents have enough to worry about. Please keep All of us healthy!!!

Morgan Sanchez

|| 302-1

|| 302-2

302-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

302-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 303: Melanie Warren

I have seen first hand the effects of the contamination. It is important for people of all ages that this situation be rectified. Enough with innocent lives being lost. Please, clean up the waste.

Melanie Warren

|| 303-1
|| 303-2

303-1 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

303-2 DOE acknowledges your concern about cleanup of waste. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 304: Kristina Katz

There is no place for any labs or toxins in such a heavily residential area! Cancer and related conditions are skyrocketing! Lives, lives of innocent children should be considered before money and profits! Go and do your experiments in the desert and leave our community alone!

Kristina Katz

|| 304-1
 || 304-2
 || 304-1
 || cont'd

304-1 As indicated in Chapter 1, Section 1.3, of this Final EIS, DOE operations at SSFL ended in 1988. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). Most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE is now addressing final cleanup of Area IV and the NBZ, the portion of SSFL for which it is responsible. As stated in Chapter 1, Section 1.1, "Purpose and Need for Agency Action," of this Final EIS, DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. These requirements include regulations, orders, and agreements. To this end, DOE would need to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers.

304-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 305: Anonymous

We demand a full cleanup of all the toxins for the health of our children and future residents in the area.

Anonymous

305-1

305-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 306: Anonymous

I live extremely close to the effected area and just gave birth to my first child whom I was pregnant with while living in the area. My young family lives here and calls this home and now feel unsafe. I want to see this site cleaned up, as had originally been promised, AND a study done within a 20 mile radius of all the cases of childhood cancers occurring - or all cancer for that matter, so we can better understand and be proactive to the health needs of our community and our family. I am an oncology healthcare professional and am disheartened that this has not been cleaned up and is even a discussion. Those making the decision - I would love to know if you would live next door to this area or if you would want your children or grandchildren raised in its backyard. Not all of us have the financial means to pack up and leave and need to be prepared and advocate for this being cleaned up.

Anonymous

306-1

306-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

306-2

306-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 307: Jill Yuhasz

People and children are sick. People have died. Clean up this nuclear mess please.

Jill Yuhasz

307-1

307-1

DOE acknowledges your concern about cleanup of the nuclear mess. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 308: Anonymous

Please do a full clean up of the Simi Valley site. Our precious children are worth it and the gamble of leaving the nuclear remains there is not. || **308-1**
|| **308-2**

Anonymous

308-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

308-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 309: Anonymous

We need a full clean up! There have been multiple cases of extremely rare cancers in children who live in the surrounding areas. We need to uphold the values the conejo area says it lives by, and that is protecting its residents. Only a full clean up will accomplish this.

Anonymous

|| 309-1

|| 309-2

309-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

309-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your preference for a full cleanup of SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 310: Anonymous

I own commercial property and conduct a lot of business in the San Fernando Valley. I was considering buying my permanent home and raising children in the San Fernando Valley as well, but will decide against doing so unless the site is cleaned up, as had originally been promised, AND a study done within a 20 mile radius of all the cases of childhood cancers occurring - or all cancers for that matter, so we can better understand and be proactive to the health needs of the local community.

Anonymous

310-1

310-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

310-2

310-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 311: Lilly Dollenmayer

As a tax payer of this area, I demand that we protect the health of our citizens. The number of unexplainable childhood cancers in our area should be reason enough to do a COMPLETE and IMMEDIATE clean up of the Santa Susana Field Laboratory. It is a crime to not consider the health data recorded and the citizens of our area will not stand for negligence.

Lilly Dollenmayer

311-1

311-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

310-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. As discussed in this EIS, NASA and Boeing are remediating those parts of SSFL for which they are responsible.

Commenter No. 312: Amy Lehman

My 12 daughter was diagnosed with a very rare cancer in 2013, along with many other children in the Conejo Valley, which I firmly believe is a direct result of the contamination of the SSL site. The DOE and Rock-etydyne have put this community at risk for too long. Anything less than a full clean up is unacceptable. You cannot put profits over health and safety. We need to ensure all radiation and chemicals are removed from the soil and prevent new homes and parks from being built around the site. The delays and stalling have put more and more lives at risk, and the DOE should be fully culpable.

Amy Lehman

312-1

312-1 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

312-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

312-3

312-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter risk assessment approach for soil cleanup is consistent with the approach used by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by U.S. Environmental Protection Agency (EPA) at CERCLA sites. As

Commenter No. 312 (cont'd): Amy Lehman

discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

312-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. Also, see Section 2.1, "Preferences for Cleanup," of this CRD for discussion and DOE's response to concerns over alternative selection.

Commenter No. 313: Heather Gibson

Clean up the Santa Susanna hazardous waste site!!! For our children!!!
Heather Gibson

|| **313-1**

313-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 314: Anonymous

We must clean up the site to protect our kids from getting sick, it must be done asap!!! Rates of cancers in Kids are much higher in areas close to the site. This is not a coincidence. Please clean up the site!

Anonymous

|| 314-1
|| 314-2

314-1 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD regarding cleanup of the site, as well as necessary steps prior to continuing cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Also see Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3 of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. Information on the selection of alternatives for cleanup of SSFL Area IV and the NBZ will be included in the ROD(s) for the EIS. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental

Commenter No. 314 (cont'd): Anonymous

impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. DTSC issued the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* in September 2017 (DTSC 2017b). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

- 314-2 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 315: Sarah

Please do a full clean up of the area.

Sarah

II 315-1

315-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 316: Michele Henderson

As a community, a parent, a human being..we are begging you to start clean up on the toxic site where the nuclear meltdown occurred. There are numerous cases of rare childhood cancers with one little girl being in my daughters kindergarten class. The facts are overwhelming, something must be done! This will not go away; we will continue to put pressure on you to do something, there are lives at stake.

Michele Henderson

316-1

316-1 DOE acknowledges your concern about cleanup of Area IV at SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

316-2

316-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 317: Alexis Haines

Hi, I am a concerned mother who lives in the Canejo Valley. I would like reassurance that the SSFL clean up is a top priority for your agency. This clean up is imperative. The children are suffering as a result. We know that there are higher cases of cancer within a 20mile radius of the test site. Please make sure that this is cleaned up quickly and effectively. Thank you,

Alexis Haines

317-1

317-1

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

317-2

317-1
cont'd

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3 of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. Information on the selection of alternatives for cleanup of SSFL Area IV and the NBZ will be included in the ROD(s) for the EIS. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. DTSC issued the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* in September 2017 (DTSC 2017b). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

317-2

DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 318: Neri Gauthier

I would like (demand) a full clean up of the nuclear waste site at Santa Susana. I have 2 small children and am pregnant with a third. Their safety is my greatest concern please move forward with a full clean up.

Neri Gauthier

|| 318-1
|| 318-2

318-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

318-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about a full cleanup and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 319: Nichole Fogle

I would like to request a full clean-up from the Santa Susana Field Lab meltdown. I would like a full and complete survey done of the risk to children and others in our communities. I live in Thousand Oaks and have many friends and loved ones in Simi Valley, the Conejo Valley, and the San Fernando Valley. A friend of mine has found at least 30 other children with rare cancers who live within 20 miles of the site. I have two small children and I am very uneasy with the idea that a full clean-up will not be required. At the very least, more research should take place before a decision is made - specifically related to childhood cancer risks and rates in this area. Thank you for hearing my opinion and the voices of families across our communities.

Nichole Fogle

|| 319-1

319-2

319-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

319-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about a full cleanup and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 320: Anonymous

Please clean up and protect our community

Anonymous

|| 320-1

320-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 321: Susan Bealand

In 2012 my granddaughter, Kaitlin Lehman, was diagnosed with Rhabdomyosarcoma. She lives in Newbury Park. The cost of treating this disease, physical, mental, emotional and financial, was absolutely devastating to the entire family. Any agency that denies or refuses to comply with clean up orders related to this atomic disaster is criminally negligent and should be held accountable in every court in the land. Every family who has suffered from this disaster should be allowed to seek millions of dollars in compensation for damages to health. That would make a thorough clean-up look cost effective. Quickly.

Susan Bealand

321-1

321-1

Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. It is DOE’s intent to clean up those parts of SSFL for which it is responsible, Area IV and the NBZ. The purpose of this Final EIS is to evaluate alternatives for completing that remediation. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

321-2

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Please refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

321-2

Thank you for your comment. It has been included in the Administrative Record for this EIS.

Commenter No. 322: Jennifer

When we are children we are taught early on a few things in life. Saying please and thank you, sharing, no hitting, clean up after yourself, honor your word. Somewhere along the line some forget these things. Some are never taught these things in the first place. I am reminded of this fact more frequently by the minute in these past few weeks. Very few viable silver linings on the horizon. I am genuinely concerned and terrified at the idea of an area such as this one going uncleaned to the fullest potential. Anyone who goes near that area can see it's a barren wasteland. A nuclear accident occurred at this site as well as countless other unmonitored pollutant filed activities and testing were performed in that area. Restrictions and laws were different, science was not as advanced and knowledgeable as it is today. Please require that the land be cleaned of ALL toxins. Carcinogens, emissions, nuclear runoff whatever it is cleaned. I bring us back to those first things we learned as little ones: clean up after yourself. Your room wasn't clean unless it was 100% clean... still isn't even as an adult so WHY are we asking for anything less from anyone else? You don't expect a 30% cleaned hotel room, 30% clean dishes at a restaurant, or a 30% cleaned doctors hand... let's re think this again. Not to mention the countless strange, abnormal diseases and cancers people are struggling an answer for. It's not right that this community should allow this to be swept under the rug any longer. My fiancée's mother has a very bad case of a rare untreatable disease and she has lived in the area since her childhood. I have watched her condition decline rapidly in these last few years. She lived in one of the more densely populated affected areas where more cases of these strange medical occurrences are happening. She is 65. My fiancée struggles with many health problems as well. I have noticed the water quality to be almost toxic and I wonder if it is due to this being a strong contaminant in our soil, air and water. We have already allowed so much time to pass that so much damage has already been done. It's almost heartbreaking to have to plead to our government to have a nuclear site that had an accident cleaned decades later to 100% or as close to it as humanely possible. This company should have been solely responsible, but what happened? Our land and people, animals, water and air, possibly down to a cellular level are contaminated with one of the worst things it can ever come in contact with. It has been long enough!

Jennifer

322-1

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322-3

322-1
cont'd

322-3
cont'd

322-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter approach the use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

322-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

322-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 323: Tanya Calderon

Please clean up Santa Susana immediately!!

Tanya Calderon

|| 323-1

323-1

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD(s) pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]).

DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS RO ROD(s) D and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 324: Yun Mei Lee

Please clean up the site. We want our children to be cancer free
Yun mei lee

|| 324-1

324-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 325: Alexandra Loew

Please take the time, care, energy and dollars to properly clean up this site. Please do. It leave the contamination on site. Please take heed of the emergence of child leukemia and other cancers afflicting young fragile and innocent lives - and their families - in the vicinity. Please do the right thing. Please listen to the scientists and doctors. Thank you.

Alexandra Loew

325-1

325-2

325-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. 325-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 326: Brittany Adams

I was Diagnosed with Rhabdomyosarcoma lived in Westlake village California in the year 2000 This cancer is extremely rare but it very common in the areas surrounding this toxic site.no doubt related to toxins in ground or ground water etc that originated at SSFL / rocketdyne I had chemotherapy treatment and surgery and feel lucky and blessed cancer free 17 years later. This is a childhood cancer affecting the most vulnerable of people small children and even Infants. In my case a teenager. I am blessed to be alive. Please clean up this toxic mess and help protect the children so they don't have to suffer through treatment or even worse die. Heartbreaking for everyone. Asking you to do the right thing and protect citizens especially the little ones who are so vulnerable to cancer! Clean Up This Mess Thanks

Brittany Adams

326-1

326-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding toxins in the ground or groundwater originating from SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

326-2

326-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 327: Travis Robbins

The sheer possibility that anyone thinks this area is a safe zone is atrocious. Look at the concentration of childhood leukemia. This needs to be studied further.

Travis Robbins

327-1

327-1

DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 328: Jeanne Glover

Please don't just "let it be". A big clean up is required because of cancer in children from this material.

Jeanne Glover

|| 328-1

328-1

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 329: Jennifer Moore

As a resident of Simi Valley and a mom to a one year old with one on the way I am urging you to please clean up the contaminants on site at the Santa Susana Field Laboratory. After hearing many many individuals cancer stories who have grown up in or near Simi Valley or raised children here I am begging you to please do something about this! We bought our home here just a year ago and envisioned our children growing up in this safe, small, sleepy town. I am devastated and terrified about our future here now and the toxins that could potentially be doing damage to my family. Please, please clean up this site.

Jennifer Moore

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|| 329-2

|| 329-1
cont'd

329-1 DOE acknowledges your concern about cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. All of the action alternatives evaluated in this Final EIS are protective of the environment and the health and safety of the public.

329-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," for of this CRD further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 330: Ashli Shapiro

I am writing to respectfully request that a full cleanup of SSFL is performed. We know the harmful effects of radiation, and who know what else residents of surrounding areas are being exposed to. There is a cancer cluster in the 20 miles surrounding the site. There shouldn't even be a question of "How much should be cleaned up?" It should be a question of "How QUICKLY can we get this ALL cleaned up?" Thank you - this effects us all.

Ashli Shapiro

|| 330-1

|| 330-2

|| 330-1
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330-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. DTSC issued the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* in September 2017 (DTSC 2017b). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition

330-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS

Commenter No. 330 (cont'd): Ashli Shapiro

which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 331: Katheryn Faulconer

I grew up in East Simi Valley. I was diagnosed with stage 2B Invasive Ductal Carcinoma at the age of 33 years old. I started feeling the tumor at 32 years old and was brushed aside by doctors because I was “too young”. That gave the tumor time to grow and also enter my lymph system. I have gone through chemotherapy and five different surgeries since my diagnosis. I have lost my breasts, nipples, hair, and both ovaries. Now I have a one in five chance of dying in the next seven years, based off the statistics. I am negative for BRCA 1 and 2 and I have absolutely zero family history of breast cancer. I have three friends (who are my age and grew up in Simi Valley) also get diagnosed with breast cancer. Two of them have already passed away. Nine people in my graduating class of high school (SVHS 1998) have been diagnosed with cancer so far. And I have other dear friends who have children who are fighting for their lives right now because of their rare childhood cancers they have been diagnosed with who live in Simi Valley. The idea that all of these cancer diagnoses are because of Rocketdyne’s mishaps and cover ups is absolutely disgusting to me. Enough is enough.

Katheryn Faulconer

331-1

331-1

DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 332: Melissa Paul

Please remediate and clean to the fullest extent possible, under the highest, best practices known. Do not give credence to commercial interests and enterprises. This is shameful. It has caused thousands of childhood and early adult cancers throughout the surrounding areas. It will continue to do so. The clean up **MUST** happen, it is your moral obligation.

Melissa Paul

332-1

332-2

332-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

332-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding cleanup, Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 333: Rose White

Hello, My name is Rose White and I am a resident of Simi Valley raising 3 young children. I'm writing you today because there needs to be a full clean up done at the Santa Susana Field Site. It's time that measures are taken to have this toxicity removed. The area surrounding is full of families and this potential hazard is unnecessary. Women in the east Ventura County communities of Thousand Oaks, Simi Valley, and western Los Angeles County had invasive cancer rates of 10 percent to 20 percent higher than the rest of California. How many more people need to suffer and even die due to negligence? How many more law suits? How much time and money has been wasted already because of this? Others are hesitant to move to Simi Valley because they have heard of the higher cancer risks. Let's make a better future for all Ventura County residents and clean the Santa Susana Field Site. Thank you for your time. Sincerely,
Rose White

Rose White

333-1

333-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

333-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

333-2

DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil

Commenter No. 333 (cont'd): Rose White

and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. As discussed in this EIS, NASA and Boeing are remediating those parts of SSFL for which they are responsible.

Commenter No. 334: Heather Compton

I am a resident of Simi Valley and I am very concerned about the clean up efforts for the SSFL meltdown. My family personally knows several family who have been impacted by cancer in our area one of which is a teenage boy who was diagnosed with cancer and the only one to have survived. Those who were not as fortunate include two young men and one middle aged women who succumbed to un-treatable cancers of different types and have heard stories of many others. We want to see a FULL clean up of this area and we are NOT on board with leaving up 93% of the contaminants on site. We don't want to watch our children and loved ones suffer through more pain and possible deaths because a company doesn't want to clean up their mess properly. I ask you to please considers all the lives your decision affects.

Heather Compton

334-1

334-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

334-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

334-1 cont'd

334-2 cont'd

334-2

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 335: Hilary Principe

For the sake of everyone’s wellbeing that live in the vicinity and surrounding areas, please ensure the Santa Susana site is cleaned up 100% to the fullest extent possible. The amount of people that have been exposed to these toxins and have developed rare cancers is disturbing, alarming, unacceptable, and most of all devastating to all the families involved. Please please please clean up this site in totality without leaving any contaminants behind. Thank you!

Hilary Principe

- ||| 335-1 335-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.
 - ||| 335-2
 - ||| 335-1 cont’d
- The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.
- 335-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 336: Nichelle Thrash, Rolling Oaks Enterprises

Please, don't continue to skip scheduled clean-ups of the Santa Susana Field Lab.

Nichelle Thrash
Rolling Oaks Enterprises

|| 336-1

336-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 337: Laura Paterson

I believe that more research needs to be done, specifically an assessment of pediatric cancers within a 20 mile radius, and/or a full clean up of the site. It is unacceptable to leave known contaminants on site.

Laura Paterson

|| 337-1
|| 337-2

- 337-1 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding cleanup of SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.
- 337-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 338: Nivole

I demand a full clean up for the safety and futures of my 3 children and the larger community.

Nivole

|| 338-1

338-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 339: Susie Segovia

This is a call for action. It is imperative that a complete (100%) -clean-up of the SSFL Area IV EIS be completed. Unfortunately, the alternative approach by the DEIS is highly inadequate as it will continue to place our community at risk with the continued toxic exposure. Furthermore, it should be noted that a research study on Cancers/chronic conditions in correlation with the environmental toxins be conducted as a result of the nuclear spill. Finally, I ask for accountability because human lives matter.

Susie Segovia

339-1

339-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

339-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

339-2

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 340: Jamye Waxman

Please clean up the plant and stop Cancer

Jamye Waxman

|| 340-1

340-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 341: Priscilla England

To many cases of cancer have been documented in this area to the point that the probability of coincidence is very low. A full investigation must be done and thorough clean up must be mandated. The innocent people in the surrounding areas deserve safety and we have an obligation to provide a safe and cancer free environment. Investigate the effects of cancer and clean up!

Priscilla England

341-1

341-1

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD regarding cleanup of SSFL, Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 342: Michael Bakkenson

It is unacceptable that this site has remained in such a state for so long. Please ensure the contaminants get removed and the site is restored to background standards. My nephew who lived in Chatsworth contracted a rare form of cancer. My own family lives in West Hills-- a few miles away. Please clean it up. There is more to life than whatever is holding the process up.

Michael Bakkenson

342-1

342-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

342-2

There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

342-2

DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of SSFL, as well as necessary steps prior to continuing cleanup, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 343: Katie Rothman

I lived in West Hills in Hidden Lake during my pregnancy in 2009-2010. My son was born in 2010 and diagnosed with a rare cancer in 2012. I wondered if we were living within that 20 mile radius as I believe we were.

Katie Rothman

343-1

343-1

DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 344: Bianca Gonzales

This needs to be cleaned up! How can it possibly be safe for all this hazardous waste to be so close to our city!? There are so many young children who have already been affected by this chemical waste. All so young and haven't been able to fully enjoy their childhood. This needed to be properly cleaned and disposed of. Do it for all the children who have been affected by it, and so others won't be harmed by it.

Bianca Gonzales

|| 344-1

|| 344-2

344-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

344-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of SSFL, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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Commenter No. 345: Bonnie Klea

Cleanup all of the rads and chemicals. A 45.1 million dollar rad survey shows where all of it is located. The cancer toll around the site is huge. There are 3881 cancer claims from workers, a former retina blastoma cluster, a child leukemia cluster now, former research shows cancer at 2 miles is 60% higher than 5 miles and census tracts that show bladder cancer is 50% higher. What are you waiting for?

Bonnie Klea

|| 345-1
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|| 345-2

345-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

345-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]).

DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 346: Amy Diaz

I am a resident in the area impacted by SSFL meltdown. I want the area 100% cleaned up and contained with no further exposure to the neighborhood and its surrounding areas. My little cousin at age 11 was diagnosed with a “rare” cancer. He is now 13. He is not the only kid in the area that got a rare cancer. I have grown up in the West San Fernando Valley, and am now raising MY children here. Please help make our community safer by removing these known toxins in our land.

Amy Diaz

346-1

346-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

346-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. At these concentrations and based on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

346-2

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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Commenter No. 346 (cont'd): Amy Diaz

are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 347: Dave Gibson

Please clean up the SSFL for our children!!! They are worth it! Cancer rates are skyrocketing, it's horribly sad. Please!

Dave Gibson

|| 347-1

347-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding cleanup of SSFL, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 348: Anonymous

This needs to be cleaned up and not just sealed up. Why have peoples health at risk? The Department of Energy, NASA and Boeing need to be accountable for complying with the required cleanup at Santa Susan.

Anonymous

348-1

348-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 349: Martha Martinez-Bravo

I am a resident at Village at the Park in Camarillo, CA. We are a family with three young children and we are deeply concerned with the Santa Susana toxic mess that has caused cancer to many young children. Our children are not experiments. We need it cleaned up now! We need an efficient clean up now! We will not tolerate any short-cuts that puts any child at continued risk. Please do your part and protect our children. They are our world.

Martha Martinez-Bravo
Mother and Doctor of Clinical Psychology Jose Bravo Father and Family Physician

349-1

349-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

349-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

349-1
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349-2

349-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 350: Sara Hamilton

The waste needs to be completely cleaned up!!

Sara Hamilton

|| 350-1

350-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 351: Tina Shaffer

Have you researched the cancer population among the children in the vicinity?! Take the moral and thickly road and clean up the toxins!

Tina Shaffer

|| 351-1
|| 351-2

- 351-1** DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.
- 351-2** DOE acknowledges your concern about cleanup of toxins. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 352: Bevin Pike

As a resident of Simi Valley, I am very concerned about the potential effect any residual nuclear and toxic waste will have on our residents and our children. There have been no studies on the effects of these residual wastes on children and with a prevalence of kids with rare cancers in the area, this absolutely needs to be done. Don't let this be the Ford Pinto of our generation, where the cost-benefit analysis is valued over human, and specifically our children's, lives. Abide by your original promises and contracts and perform a full clean up of the site.

Bevin Pike

352-1

352-1

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

352-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

352-2

Thank you for your comment. It has been included in the Administrative Record for the EIS. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. DOE performed a cost-benefit analysis of the soil remediation alternatives as part of this EIS (see Appendix K). The results of the analysis show that the cleanup under the Cleanup to 2010 AOC LUT Values Alternative would be much more expensive and with minimal additional protection of public health and the environment compared to the other project soil remediation alternatives

352-3

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 353: Virginia Dooley

I have two small children and I am extremely concerned about this area.
Please get this area cleaned up as soon as possible.

Virginia Dooley

|| 353-1
|| 353-2

353-1 DOE acknowledges your concern. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

353-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 354: Anonymous

I urge you to make sure it gets cleaned up from all toxins! We shouldn't live in fear of getting sick. Our city should be a safe city to live in, including the soil & water around us.

Anonymous

|| 354-1
|| 354-2

- 354-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 354-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 355: Shannon

We want the toxic and nuclear waste removed completely! Too many kids in your area are being affected by rare cancers! This is not a coincidence. Please do the right thing and make it safe!

Shannon

|| **355-1**

|| **355-2**

355-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

355-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 356: Tammi Pickle

I am requesting full clean up of the Santa Susana site for the health of the citizens of Simi Valley especially for the children living and breathing in this toxic environment. Please do something about this for the health of our beautiful city and citizens.

Tammi Pickle
Citizen of Simi Valley

356-1

356-2

356-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives. Also please see Section 2.7, “Offsite Impacts” of this CRD. As described in this section, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA’s soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC’s review of the data (included as part of DTSC’s broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

356-2 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 357: Tonia Green

It is ridiculous and inhumane to disregard the evidence of an increase of childhood cancers found in the surrounding areas. It is absolutely unacceptable to turn a blind eye just because you do not want to take responsibility for the consequences of neglecting this site. How dare our children be subjected to these toxins and experimented with. Please do the right thing and clean up the site!

Tonia Green

357-1

357-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

357-2

357-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 358: Anonymous

This is just terrible. Children are dying. Please clean up this mess asap.

Anonymous

|| 358-1

358-1 DOE acknowledges your concern and refers you to Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD regarding cleanup of SSFL, as well as necessary steps prior to continuing cleanup, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 359: Nicole Malone

It is reprehensible that this issue even needs discussion. Our government owes its citizens a safe living environment. These are family communities & the health of a generation depends on a thorough clean up. I have two young children & I live with a constant underlying anxiety about living in Simi Valley because of the toxic history. But I work here & I love my community. It's time to clean it up. It's actually past time, but as I tell my students: better late than never.

Nicole Malone

359-1

359-2

359-1 DOE acknowledges your concern and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding cleanup of SSFL, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

359-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]) DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 360: Stacey R

This must be cleaned up. Our children are at risk. Please take care of the mess that we have been faced with. I am concerned for my family and all the others in our area that are affected by this toxic mess.

Stacey R

|| 360-1
|| 360-2

360-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

360-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Descriptions of the alternatives and a summary of the potential impacts are provided in Chapter 2 of this EIS. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 361: Anonymous

I am a teacher and mother to a 2 year old and a 4 year old. I am terrified for their health because we live within 20 miles of this toxic disaster. Why hasn't this already been removed 100%? Our beautiful community needs this out!! If you care about children you will fix this now! Stop telling us this isn't a threat to our health. The cancer cases prove you wrong. Good needs to win over evil...please do the right thing.

Anonymous

||| 361-1
|| 361-2
||| 361-1
cont'd

361-1 DOE acknowledges your concern and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding cleanup of SSFL, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

361-2 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3 of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. Information on the selection of alternatives for cleanup of SSFL Area IV and the NBZ will be included in the ROD(s) for the EIS. As discussed in Chapter 1, Section 1.9.2 of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL. DTSC issued the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* in September 2017 (DTSC 2017b). DOE will begin

Commenter No. 361 (cont'd): Anonymous

final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS R ROD(s) OD and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 362: Tabatha Saldivar

We deserve to not live in fear that our children are dying because of the area we live in! Please clean up the Santa Susana Nuclear site! The citizens in Ventura and Los Angeles County did NOT cause this and we SHOULD NOT have to suffer the on-going consequences. Our children deserve the same opportunity as children in non-affected neighborhoods. We aren't going away and we will use the power of social media, local networking and community awareness and involvement to get this corrected. Please do not let this turn into Hinkley, California or Flint, Michigan. Please think of our children and all the children that have already suffered from this catastrophic meltdown.

Tabatha Saldivar

362-1

362-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

362-2

362-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 363: Nicole Golden

I want all of the terrible waste cleaned up at the santa susana rocketdyne area. It is dangerous and hazardous

Nicole Golden

363-1

363-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with the approach used by DOE at other DOE sites, by DTSC at other DTSC-regulated sites, and by U.S. Environmental Protection Agency (EPA) at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 364: Anonymous

Please keep our children safe and clean this site 100%

Anonymous

|| 364-1

364-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 365: Sheri Dinse

We should not have to live in fear. Do what is right and properly clean up this disaster!!

Sheri Dinse

|| 365-1

365-1

DOE acknowledges your concern about cleanup of SSFL. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 366: Anonymous

There has to be accountability and responsibility in the clean up of this area. Far too many illnesses tracked in these areas to make them a coincidence. Now corners may be cut? Not fair to the people living in the surrounding areas do you're part as human beings and make the right decision and force 100% clean up.Thank you.

Anonymous

366-1

366-1 There are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of this work. Each of the three parties is responsible to remediate the areas where its work was performed. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

366-2

Please see Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about cleanup of SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

366-2

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 367: Adriana Wendland

I am a resident and concerned about the impact nuclear and toxic waste might have on my children and the children in the community. Please do right be the families that could be impacted.

Adriana Wendland

367-1

367-1

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 368: Bridgette Rosson

In my opinion, the clean up needs to be 100% done and should have been done decades ago. My sister passed away in 1986 at the age of 17 from Ewing Sarcoma. It is a rare bone cancer. We grew up in Canoga Park between Roscoe and Parthenia. My older kids grew up on West Hills and both have had friends diagnosed with cancer and friends that have passed away from cancer. This has all been in the last 5 years. I think studies need to be done on the rates of cancer in the area, as well as the clean up.

Bridgette Rosson

|| 368-1

|| 368-2

368-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

368-2 DOE acknowledges your concerns and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 369: Lisa Hunzeker

My family and I are residents of Thousand Oaks and are extremely concerned about the residual effects of the toxic land from the SSFL and demand a 100% cleanup.

Lisa Hunzeker

||| 369-1
|| 369-2

369-1 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

369-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 370: Heather N. Johnson

Clean up the site! I've been reading about rare forms of cancer being discovered in the communities surrounding the SSFL

Heather N. Johnson

|| 370-1
|| 370-2

370-1 DOE acknowledges your concern about cleanup of SSFL. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

370-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 371: Robin Williams

Department of Energy,

I have lived in Simi Valley for seven years and have found it to be a wonderful place to raise my three children, but the more I learn about the Rocketdyne meltdown and the lack of remediation at the Santa Susana Field Lab, the more I worry about the health and safety of my children. I now worry about the soil in Simi Valley and even more so our groundwater. I worry about my friends battling cancer and seeing friends children spend more time in a pediatric oncology unit than at their elementary school. My job as a mother is to worry about the health and safety of my children, your job is ensure the complete clean up of any and all areas affected. Anything less than 100% remediation of the Santa Susana Field Laboratory is unacceptable. Please do the right thing for the residents of our city and ensure the clean up is done!

Robin Williams

371-1

371-1

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information regarding a complete cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

371-2

Please also see Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

371-2

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

Commenter No. 372: Anonymous

I would like a full clean up to be done so no more people will suffer cancer from this situation.

Anonymous

|| 372-1

372-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 373: Sian Jones

Please ensure you decontaminate this site, cancer caused by environmental exposure is real and this site is affecting the local community. You have the ability to do something that may save a life and stop a family suffering, do the right thing!

Sian Jones

|| 373-1

|| 373-2

373-1 DOE acknowledges your concern about decontamination of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information regarding a complete cleanup of SSFL.

373-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite environmental exposure and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 374: Amanda Richins

We moved to Simi Valley in 1997, top of Indian Hills to be exact. This month marks 10years since my mom passed away from brain cancer-anaplastic astrocytoma. She had a an MRI prior to moving here from Texas to get a baseline for her headaches. 12yrs later (Dec 2006) she was diagnosed and passed away Feb 2007. Her tumors didn't respond well to medications and she also developed little tumors in separate lobes of the brain which is not characteristic of her cancer. She was only 42, wife, mom of two, ICU nurse, active runner, and road biker. Please clean up the area keep residents safe and ease all our minds. Thank you.

Amanda Richins

374-1

374-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

374-2

374-2

DOE acknowledges your concern about cleanup of the area. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 375: Adrianna Jimenez

My family has lived in Ventura County for over a century and we were unaware of the the toxic contaminants until moving to Simi Valley a few years ago. I was heart broken to hear that local residents,many of whom are children, have been diagnosed with cancer. We implore the DOE to follow through with the previous decision to clean up all of toxic contaminants in Santa Susuana and surrounding affected areas. Thank you.

Adrianna Jimenez

375-1

DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

375-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. DOE’s purpose in preparing this EIS is to evaluate alternatives for cleanup of Area IV and the NBZ, those portions of the site for which it is responsible. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

375-2

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. DOE is responsible for the cleanup of area IV and the NBZ. But, as described in Section 2.7, “Offsite Impacts” of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA’s soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC’s review of the data (included as part of DTSC’s broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

Commenter No. 376: Heather McDowell-Lynch

As a resident of Simi Valley I demand that all hazardous and toxic waste be fully removed and cleaned. To do anything less than a complete clean up is condemning an entire community to death and illness. It is not only a civic duty but also a moral one

Heather McDowell-Lynch

|| 376-1
|| 376-2

376-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

376-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding complete cleanup of SSFL, Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 377: Amy Hunter

PLEASE PLEASE PLEASE no reduction in clean-up...We have at least 35 children in the area with rare forms of cancers.

Amy Hunter
Simi Valley Citizen

|| 377-1

377-1

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 378: Laurel Deurmier

I make my children clean up their messes everyday. This “mess” has been there way too long. Please clean it up! Too many families have been affected.

Laurel Deurmier

|| 378-1
|| 378-2

- 378-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 378-2 Please see Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 379: Carla

This site needs to be cleaned up!! It's unsafe and there are so many cancer cases resulting from this toxic area. I want to feel safe living here being so close to the site.

Carla

|| 379-1
|| 379-2

379-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

379-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

Commenter No. 380: Christa Nonnemaker

I am alarmed at the cancer rates among children in Simi Valley, west San Fernando Valley and Conejo Valley. I am also somewhat concerned about adult cases in the same locations to people in their 40s. Please do the right thing and make sure to clean up the toxic waste that is harming our community.

Christa Nonnemaker

380-1

380-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

380-2

380-2 DOE acknowledges your concern about cleanup of toxic waste at SSFL. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 381: Shannon Smith

So scary. Im going to get the heck outa here, ive been in simi since 2008. In 2014 i had my apendix out, found out i had a tumor on my kidney, it was removed and was positive melanoma (cancer). Im going in for a surgery on the 9th to check my uterus for cancer. Ive been spotting in between periods, so thats why im having the test. After i had my appendix out 3 of my Neighbors had their apendix out too and then my son last year. I thought that was a wierd coincidence!! Also my daughters friend that lives in our complex had childhood leukemia!! Im so freaking out right now..... Please clean up santa suzanna!! I love living out here, the community is amazining, but i have children and i will not risk their lives by living by a toxic waste. Have you no heart? How has this not been taken care of. There are many more children and adults that i have read about, that have some sort of illness, or cancer!!

Shannon Smith

381-1

381-1

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

381-2

**381-1
cont'd**

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

381-2

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 382: Heather Olson

I have 2 toddlers at home and I live with the fear of my boys getting cancer from this site like so many other children in the area. Please clean up 100% of the contaminants on the site. Do it at any cost! Do it for my children and their future. These children are too young and are so innocent and haven't lived enough of the good life yet, they shouldn't be put at risk to have to go through fighting cancer or disease by something that can be prevented. You wouldn't want your children to be put in this situation, by not cleaning this up 100% you would be doing it to ours. Please, please, please help us take the risk away from our children!

Heather Olson

|| 382-1
|| 382-2

382-1
cont'd

382-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of SSFL, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

382-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 383: Anonymous

Please remove all toxic wastes

Anonymous

|| 383-1

383-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 384: Anonymous

Nothing less than a full cleanup is unacceptable! The fact that over the last 40-50 years that this has remained toxic in an area in the San Fernando Valley with hundred of thousands of residents affected is immoral. Boeing and the Department of Energy has been NEGLIGENT in not cleaning up this site to the fullest extent possible. I support a compete and FULL cleanup and anything less would be criminal. The obligation of the DOE and BOEING is clear and their immediate action needs to be undertaken and the site needs to be repaired to the preexisting condition.

Anonymous

384-1

384-1 DOE acknowledges your preference for a full cleanup and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

384-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

384-2

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 385: Sara Macaluso

I strongly urge the DOE to pay attention to the parents who have begun to map cases of cancer in children around the Santa Susana Nuclear Waste facility. As a mother of a young child in the area I am terrified for his long-term health and fearful that lack of attention to this issue puts him at continued risk. Apparently the DOE has cited truck exhaust and other environmental concerns in regards to cleaning up this Waste site, but concern for the health of our children - and the risk of life-threatening cancers - far outweighs any environmental concerns. Please do the right thing by the children in this area and investigate the possible cancer cluster and do what is necessary to ensure the health and safety of our children.

Sara Macaluso

385-1

385-1

DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. The evaluation allows a comparison of the potential impacts that implementing each alternative could have on all resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and traffic. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 386: Alejandra Ortega

To whom this may concern. Please hear our hearts Cry for all the innocent kids,our children and the parents Who have to pay the consequences for irresponsible Accidents and testing! I'm seeing more and more people Suffering cancer problems at such a young age and We suffer watching them die and go through agony. Please help make our community a place where we can live Without the worries of who gets cancer next. The Cleaning of the nuclear spill is crucial.

Alejandra Ortega

386-1

386-1

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

386-2

386-2

DOE acknowledges your concern about cleanup of Area IV at SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Committer No. 387: Sandra Andrade

Please do a complete clean up of the SSFL. I currently live in Santa Paula but I lived in Chatsworth on Poema Pl while I was pregnant with my first child Sophia. At the age of 2 years old she was diagnosed with stage 4 neuroblastoma. We were told by her oncologist that neuroblastoma is encoded in the baby's DNA in the first trimester. Sophia passed away in 2014 after a 2 1/2 year battle with childhood cancer. Please clean this mess up fully to help prevent cancer in more children.

Sandra Andrade

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|| 387-2

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cont'd

387-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 387 (cont'd): Sandra Andrade

- 387-2 DOE thanks you for your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 388: Dollirae Gray, Thomas and Gray Services

To Whom It May Concern: Please do ALL that you can to clean up the toxic waste in the SSFL area. I have four children and I want them to grow up in a safe environment. I want to see this done as soon as possible so that more children are spared the tragedy of childhood cancers. Please help us.

Dollirae Gray
Thomas and Gray Services

|| 388-1
|| 388-2

388-1 DOE acknowledges your concern about cleanup of toxic waste at SSFL. DOE’s purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

388-2 DOE acknowledges your concern and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding cleanup of the site, as well as necessary steps prior to continuing cleanup, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 389: Cynthia Gudino

I am contacting you because I want you to clean up the 93% of contaminated land in Santa Susana! I have small children and do not wish for them or us to get sick from this contamination exposure that you should have cleaned up years ago!!!!!! Why hasn't this been cleaned up? Children are getting cancer from this! You may contact me [REDACTED] if need to.

Cynthia Gudino

|| 389-1

|| 389-2

- 389-1** DOE acknowledges your concern about cleanup of contaminated land at SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.
- 389-2** DOE acknowledges your concern and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of the site, as well as necessary steps prior to continuing cleanup, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 390: Paula Roth

As a resident of the nearby areas potentially affected by the nuclear waste in said site, I request that the DOE stick to their original promise and eliminate all the waste, not just a part of it, and that this elimination be done in a safe fashion for not only the population but also the environment. It is absolutely unacceptable to even suggest that this radioactive, potentially lethal waste be left on site to naturally degrade over decades and decades. The impacts of such actions are not only shameful and outright irresponsible but potentially actionable. Please do not endanger the lives of our community, our work force, our children.

Paula Roth

390-1

390-1

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

390-2

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

390-2

Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 391: Galen Callahan

I own a real estate firm in westlake village and have made a commitment to NEVER sell anything in Simi. I also warn all my oak park clients. It's appalling that it is not an option to completely clean this up. The lives of our children depend on it. Do the right thing.

Galen Callahan

||| 391-1

391-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

||| 391-2

391-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

Commenter No. 392: Daniel Paletz

As likely one of only a few people to comment and to have read the reports it makes zero sense to not spend the \$468 million to reduce the hazard levels to something that is nearly insignificant. The populations that live in the area are tax payers and home owners who will face the human and financial cost of not conducting a full cleanup. As a father of three young children I expect government to provide the fundamental function of safety to our community. I can be reached for further comment, but I am heartbroken for the families watching. Their children die because government continues to not act. I suggest each employee of this agency sacrifice their first born if they opt to not to clean up the land completely.

Daniel Paletz

392-1

392-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

392-2

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

392-2

DOE acknowledges your concern and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding cleanup of SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV

Commenter No. 392 (cont'd): Daniel Paletz

are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 393: Rachel Nygren

I grew up in the Thousand Oaks area and only a few years ago, at the age of 38, did I learn about the Santa Susana site and how bad the spill was. This is insane that it is just a few miles from so many homes. Our children and families are suffering the consequences of this site not being properly cleaned up. DO NOT allow this to be swept under the rug. The site MUST be cleaned appropriately and in a timely manner.

Rachel Nygren

393-1

393-1

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD regarding your concern cleanup of SSFL; Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL; and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

393-2

393-2

DOE acknowledges your concern about cleanup of SSFL. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

Commenter No. 394: Charity Chapman

Hello again, I also felt compelled to write a bit of my story as a Mom of two little people who were born and raised in this area. My son has had CHRONIC mystery medical illnesses. The result has been now at age 12, he is off all normal food (dairy, wheat & eggs), has had pneumonia too many times to count and other ailments. My daughter at 8 has had mysterious stomach problems, including gastritis (that seems to refuse to heal). She is also off all normal food and eats a very restricted diet (and sadly) is sick often. They have both missed far more than their allotted amount of school. We are in the zone where apparently many toxic substances have blown or otherwise made their way down to a group of people who definitely cannot handle it. What this dirty site is doing to our kids is unthinkable. Please, please clean this mess up completely, so my kids and all the other kids in this area can have a fair shot at a healthy life.

Sincerely,

Charity Chapman

394-1

394-1 Thank you for your comment. It has been included in the Administrative Record for this EIS.

394-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

394-2

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent" of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives. Also see Section 2.7, "Offsite Impacts" of this CRD. As described in this section, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

Commenter No. 395: Anonymous

I think you owe it to our community to fully clean up the toxic environment that you created. It is highly suspicious the number of rare cancers that have popped up in children and adults closest to the site. These our people's lives we are talked about and a price cannot be put on that.

Anonymous

|| 395-1
|| 395-2

- 395-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 395-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 396: Anonymous

Please ensure 100% cleanup is completed. No alternate plans accepted.
Too many kids with cancer in our area.

Anonymous

|| 396-1
|| 396-2

396-1 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

396-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 397: Victoria Axworthy

The original AOC agreement signed in 2010 should be honored. 100% clean up should be the only acceptable solution to this terrible and historic disaster. My grandfather worked at the Santa Susana labs, my family grew up hearing the stories not to drink the Simi water and reading regularly about all the cancer found in people living in the Knollwood area of Simi. Any alternative that leaves our community without the safety of a full clean up is not acceptable. Take care of this issue the right way. The melt down was initially hidden away from public knowledge and as a result has caused irreparable harm and damage to the lives of many, do not do yet another disservice to the residents here.

Victoria Axworthy

397-1

397-1

DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including necessary steps prior to continuing cleanup.

397-2

397-1
cont’d

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD.) This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

397-2
cont’d

397-2

DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Chapter 1, Section 1.3, of this EIS contains a brief history of activities at SSFL. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV at SSFL can be found at <http://www.etec.energy.gov/>. Information about the 1959 SRE accident can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html.

Commenter No. 397 (cont'd): Victoria Axworthy

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Looking forward, the purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 398: Cassandra Burns

We want all waste eliminated from this area removed and fir the area ti be completely decontaminated. Too many people and specifically children are diagnosed with and are fighting, rare cancers. We must ensure proper measures are taken to completely remove any and all contamination from this site once and for all.

Cassandra Burns

|| **398-1**
|| **398-2**
|| **398-1**
|| **cont'd**

- 398-1** DOE acknowledges your support for cleanup in accordance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including necessary steps prior to continuing cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 398-2** DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 399: Anonymous

Please clean up this toxic mess! We need to protect our children no more cancer!!

Anonymous

|| 399-1

399-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 400: Nichole Simpson

There is an obligation to this community and surrounding impacted communities to continuously make every and all efforts over the upcoming years to provide a safe environment in the waters, air and soil. Those individuals and children within these communities especially Simi Valley may have endured unnecessary exposures because of minimal clean up efforts. We are a country of Standard and we must maintain that standard within each and every community. DOE's support on this matter in respect to health safety codes and regulations is vital.

Nichole Simpson

400-1

400-1 Thank you for your comment. It has been added to the Administrative Record for the EIS. DOE agrees that protection of the environment is an obligation. As stated in Chapter 1, Section 1.1, "Purpose and Need for Agency Action," of this Final EIS: "DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers."

400-2

400-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

400-3

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

400-3

DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in accordance with applicable regulatory requirements. Chapter 8 of this Final EIS presents the environmental, safety, and health laws, regulations, orders, and permits that apply or may potentially apply to the proposed alternatives evaluated in the EIS. Section 8.1 identifies Federal and State of California laws, regulations, orders, and other requirements, and includes those governing health and safety of both workers and the public. The requirements of applicable regulations will be incorporated as appropriate into implementation of the selected alternatives.

Commenter No. 400 (cont'd): Nichole Simpson

In accordance with CEQA, the Department of Toxic Substance Control (DTSC) must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017a]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 401: Jennifer Shewbert

I would like to see a 100% cleanup. As a resident who lives within 5 miles of the site, I expect a solution. We have a toddler, and I hate to think of the mess.

Jennifer Shewbert

|| 401-1
|| 401-2

- 401-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 401-2 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 402: Laurel Wade

This site needs to be cleaned up it is threatening the health of residents especially young children living in the area. Not one more child should have to get sick or pass away before something is done. Stop focusing on the dollars and focus on the children and families who are impacted.

Laurel Wade

|| 402-1

|| 402-2

402-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

402-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 403: Christina Hankey

Please clean up the nuclear site in Simi Valley at the Santa Susana Field Laboratory.

Christina Hankey

|| 403-1

403-1 DOE acknowledges your concern about cleanup of Area IV at SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 404: Amy Sklar

As a parent of 2 young girls living close to this site, I am exceptionally concerned about this issue. I expect you to uphold the AOC - the legal promise you made in 2010- for a 100% cleanup of all chemicals, toxins, and nuclear waste at the Santa Susana Field Lab.

Amy Sklar

|| 404-1
|| 404-2

404-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

404-2 DOE acknowledges your preference for upholding the AOC and a 100 percent cleanup of all chemicals, toxins, and nuclear waste at SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 405: Jen Coffman

Please ,please do a FULL clean up.of this site. I grew up my whole life in Simi and I worry about these cancerous side effects all the time! There are too many families loosing loved ones from this poison!

Jen Coffman

|| 405-1

|| 405-2

405-1 DOE acknowledges your preference for a full cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

405-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 406: Anonymous

Requesting a full cleanup of the SSFL
Anonymous

|| 406-1

406-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 407: Jennifer Rodionoff

I am a parent of two children, 8 and 10 years old. My husband and I purchased a home in Agoura Hills at 6301 Pisces Street shortly before my ten year old was born. We were horrified to learn about the Santa Susanna Field Lab incidents when our children were still toddlers, and that there is an established “cancer cluster” in Oak park, which was within walking distance of our home. How could it be that the site of the worst nuclear disaster in our country was five miles from our home and we had NO idea?! How could it be that in this great country such a disaster was and is still is such a mystery to the general public, that no mandatory disclosures exist, and worse that no one has cleaned up the mess yet?! We moved when my son was 6 and my daughter 4 to Westlake Village, with the clear intention of getting further away from the disaster. But are we far enough away? Have we escaped any damage from our exposure? Frighteningly, time will tell. In the meantime it is imperative that our government and the responsible parties fix this problem immediately and clean up that mess. In our country we are quick to point fingers at other “third world,” “backwards,” and even “corrupt” nations. This disaster proves we are truly the biggest offender of all. Please the time is now to fix this outrageous wrong once and for all.

Jennifer Rodionoff

407-1

407-1 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Available data and the modeling performed for this EIS (please see Chapter 4, Section 4.9) indicated that it is safe to live near SSFL.

407-2

407-1
cont'd

407-2 Chapter 1, Sections 1.3 and 1.4, of the EIS contains a brief history of activities at SSFL and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV can be found at <http://www.etec.energy.gov/>. Chapter 3, Sections 3.9.5 and 3.9.6, of the EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material.

407-3

Chapter 3, Section 3.9.6, of this Final EIS explains that at the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer.

Because of public concern about the accident, DOE hosted an informational workshop on August 29, 2009, with testimony from 3 independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the two experts was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available

Commenter No. 407 (cont'd): Jennifer Rodionoff

information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in compliance with regulatory requirements, including regulations, orders, and agreements. Please also refer to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about cleanup of Area IV, as well as Section 2.7, "Offsite Impacts," of this CRD regarding your concern about being in proximity to SSFL.

- 407-3 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC

Commenter No. 407 (cont'd): Jennifer Rodionoff

in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 408: Rachella Felix

My family and I currently reside in West Hills. I have 2 little ones, a 1 year old and a 3 year old. I was pregnant with both of them when we first moved to the location. I'm concerned with the future of their health as well as my husband's and my own health. We need a full clean up of the nuclear spill or else I'm highly considering moving out of our new home.

Rachella Felix

408-1**408-1**

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this Final EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Available data and the modeling performed for this EIS (see Chapter 4, Section 4.9 of this EIS) indicated that it is safe to live near SSFL.

408-2**408-2**

DOE acknowledges your preference for full cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 409: Cindy Kirschenmann

This is unexceptable that big corporations and big government can live by a different standard. When a decision is made to clean it up to a certain standard and big corporations chose to cheapen their responsibility. It's like your parents telling you to clean your room and all you do is throw you junk in the closet, instead of actually cleaning. I say grow up!

Cindy Kirschenmann

409-1

409-1

DOE acknowledges your concern about cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 410: Anonymous

Just clean this mess up properly already. Do you really want the blood of our babies on your hands? Jesus. Fix it and be done and let's move on and live our lives already. If you do this half ass and our kids get cancer we will sue constantly. Just be good people and fix it already.

Anonymous

|| 410-1
|| 410-2

- 410-1 DOE acknowledges your concern about the proper cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 410-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 411: Garry Wormser

Please seriously consider another route other than Woolsey Canyon Road for moving contaminated waste from the Santa Susana test site. The noisy trucks carrying contaminated substances have been destroying the roadway and polluting the atmosphere for the past decade. The 2,000 residents who live in mobile and private homes adjoining the roadway want it stopped now, not after 116,000 additional road trips ten years from now. I understand that a route down the other side of the mountain to a rail spur actually exists and could be made practical at minimum cost. Thank you.

Garry Wormser
Resident, Summit Mobile Home Community

411-1

411-1 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 412: Megan McNaught

I have been a resident of Simi Valley for the past decade, and currently work as a pediatric hematology/ oncology nurse at Children's Hospital Los Angeles. I am very concerned about the Santa Susana Field Lab's toxic and nuclear waste being in close proximity to myself and the children in my neighborhood, and am concerned about the long-term effects it may have on our health and quality of life. In my professional career, I have seen hundreds of children and their families suffer through the devastation and loss of childhood cancer. Many of these children have come from my own community, or those immediately surrounding. My co-workers, many of whom have been working much longer than I have but who live in areas more than 20 miles from the SSFL site, are shocked by the number of patients I personally know who have come through our doors in just the past 3 years. This has to stop! I am appalled that the Department of Energy has recently decided not to uphold the 2010 AOC and their promise to do a complete cleanup of the site. I do not support the alternative plans that would leave as much as 39%, 91% or 99% of the contaminants on the site to naturally decompose for an additional seventy years. Seventy years more of children being exposed to carcinogens is unacceptable! I have seriously considered whether I would have to move out of my community once I decide to start my own family, if the DOE refuses to FULLY clean up the SSFL site. I am also deeply concerned that no studies have been done on the pediatric population to date. We have preliminary evidence of a pediatric cancer cluster in the area but this information is not being considered by the DOE. As a pediatric hematology/ oncology nurse and Simi Valley resident, I find this deeply troubling and I would like more research before the site is declared "safe" by the DOE. The SSFL site must be FULLY cleaned up, and done in as safe a way as possible, utilizing back roads and trains for transportation vs main roads and highly populated areas. It is unacceptable for the DOE to try to back out of a legal agreement for a full clean up, but it is even more appalling that the DOE would even consider exposing untold numbers of future residents and children to the harmful effects of nuclear waste.

Megan McNaught

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cont'd

412-3

412-2
cont'd

412-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding cleanup of SSFL, Section 2.7, "Offsite Impacts," of this CRD regarding offsite contamination near SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

412-2 DOE acknowledges your preference for a complete cleanup of SSFL in accordance with the 2010 AOC. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent for cleanup actions by DOE at sites throughout the United States, by DTSC at other

Commenter No. 412 (cont'd): Megan McNaught

DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also note that the comment about leaving large quantities of contaminants to naturally decompose over 70 years is inaccurate. In Chapter 2, Section 2.3.2, of this EIS DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique was used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

- 412-3 DOE acknowledges your support for the full cleanup of the SSFL site. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of this topic and DOE's response. Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 413: Joshua Walker

Please do not back out of the full cleanup that was promised. The claims that the area is safe belies the fact that so many rare cancers are experienced by many within a small radius of the site. At the very least, a comprehensive survey of those living / have lived in the area and their health issues vs. public norms ought to be established. This site is very possibly extremely damaging to the surrounding communities, and if it is, it MUST be cleaned up. Thank you.

Joshua Walker
Eternity Bible College

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413-2

413-1 DOE acknowledges your preference for full cleanup. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public

413-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding cleanup of SSFL, Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination near SSFL and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public and workers.

Commenter No. 414: Lillian Radosavcev

My husband and 2 young kids live in Simi Valley, less than 5 miles away from the SSFL lab area. A new development is being built right behind our home (Runkle Canyon development) and many (including young families) are purchasing new homes in this area. The construction may be exposing harmful waste and I petition for the DOE to conduct a FULL cleanup of the SSFL, clearing out 100% of all contaminated site. There are too many children that have or have had cancer surrounding the SSFL and knowing that contaminated soil can seep into the waterway, where children may play, is of utmost alarm. Please conduct a thorough child cancer study for the surrounding SSFL area and provide the public with your results. This decision cannot be made lightly and we must protect our children and their future children. Again, I petition for a FULL (100%) clean-up of the SSFL area. Thank you for your consideration.

Lillian Radosavcev

414-1

414-1 DOE acknowledges your concerns and refers you to Sections 2.1, “Preferences for Cleanup,” and 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD regarding your concern about a 100 percent cleanup of SSFL, Section 2.7, “Offsite Impacts,” of this CRD regarding offsite contamination, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The focus of DOE’s efforts and the purpose of this Final EIS are to address remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. As indicated in Chapter 1, Section 1.3 of this EIS, NASA and Boeing are responsible for cleanup of other portions of SSFL. Existing data and analysis in this EIS indicate that all of the action alternatives evaluated in this EIS are protective of public health and safety and the environment. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

414-2

414-2 DOE acknowledges your preference for a 100 percent cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

Commenter No. 415: Alice Clark

I want full clean up of the SSFL. I go out of my way to not buy locally grown produce and will not eat out of the soil. Partial clean up is not enough. There are way too many cases of rare cancers and other unusual diseases in Simi Valley and neighboring areas. This is a known danger. We have to sign waivers saying we know what happened there and not to eat from fruit trees. This is not okay. It is time to take responsibility and fully clean the area, no matter the cost.

Alice Clark

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415-1 DOE acknowledges your preference for full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

415-2 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about the full cleanup of SSFL, Section 2.7, “Offsite Impacts,” of this CRD and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

415-3 Thank you for your comment. It has been included in the Administrative Record for the EIS. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. DOE performed a cost-benefit analysis of the soil remediation alternatives as part of this EIS (see Appendix K). The results of the analysis show that the cleanup under the Cleanup to 2010 AOC LUT Values Alternative would be much more expensive and with minimal additional protection of public health and the environment compared to the other project soil remediation alternatives

Commenter No. 416: Anonymous

If any mature oak trees are removed during the cleanup they should be replaced with 10 mature oak trees. The replacement oak trees should be at least 8 feet tall and in 72 inch box containers. The survival rate of oak trees this size is much higher than 5 gallon size oak trees. 10 young, 5 gallon size oak trees survival rate is very low and they take years to be the size of tree they would replace. Plus, an irrigation system must be provided for the first 5 years of the new trees life. This will increase their chance of survival. The planting of other native plants should also be approved by recognized botany experts. Thank you,

Anonymous

416-1

416-1

Thank you for your comments. They have been included in the Administrative Record for the EIS and will be considered during the development of the Tree Management and Preservation Plan and Revegetation and Habitat Restoration Plan identified in Chapter 6, Table 6-1, "Measures to Minimize Impacts of Demolition and Remediation Activities at SSFL and the NBZ."

Commenter No. 417: Angelique Hamane

Your mission is, “to study environmental issues affecting West Hills, to promote awareness to the public and the WHNC Board of Directors, and to take action which would have impact on the resolution of those issues to the benefit of the community.” Please abide by your mission statement and completely clean up the contamination site along West Hills. Many peoples’ lives are adversely affected. Thank you!!

Angelique Hamane



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- 417-1 DOE notes that your comment appears to address the mission of the West Hills Neighborhood Council, Environment Committee. Because the comment is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.
- 417-2 DOE acknowledges your preference for complete cleanup. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 417-3 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 418: Joseph Klein

SSFL is a wonderfully bypassed natural and cultural resource that needs to be preserved to a risk-based standard since it is dedicated to an open space level of use. This is earthquake country, and the land is fractured to incredible depth! Excavating to that level to get the last increment of contaminated soil would convert the Santa Susana portion of the Simi Hills to a pit hundreds of feet deep! Let's do this in a reasonable way, and let us, and our mammal and avian friends, enjoy this historical urban island together!

Joseph Klein

418-1

418-1 DOE acknowledges your support for a risk-based standard applied to cleanup. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also note that DOE does not own the property in Area IV or the NBZ and cannot determine the ultimate land use for the property. As discussed in Chapter 1, Section 1.5, of this Final EIS, the property owner, Boeing, intends to preserve the land as open space for the public's benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

418-2

418-2 As described in Chapter 3, Section 3.2.2, of this EIS, soils in Area IV and the NBZ are typically less than 5 feet thick although soils depths can reach 20 feet in some areas. As described in Chapter 2, Section 2.6.3 of this Final EIS, DOE does not anticipate removing bedrock except 1,050 cubic yards of rock in a small area of strontium-90 contamination under the Groundwater Treatment Alternative. DOE plans to backfill areas of removed soil and bedrock (75 percent replacement) and to recreate the contours of the current land surface to the extent possible; no large pits would be produced.

418-3

418-3 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 419: Anonymous

Please clean up this toxic site completely for the sake of the residents that live in the area. Don't do a half-ass job and don't keep treating the situation like it's no big deal. People clearly are sick and/or dying because of the chemicals and nuclear/radiological waste in the ground, air and water.

Anonymous

|| 419-1

|| 419-2

419-1 DOE acknowledges your preference for a complete cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

419-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding the potential for contamination of the ground, air, and water and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The data and analyses in this EIS indicate that all of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 420: Anonymous

The people, most importantly the children, living around the Santa Susana Field Laboratory deserve the full clean up as initially proposed. It is already putting the future health of our kids at risk. No one deserves to have this threat in their backyards. It shows the negligence of these companies if there is not a full cleanup.

Anonymous

420-1

420-1

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about the full cleanup of SSFL and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

420-2

Please see Section 2.7, “Offsite Impacts,” of this CRD regarding contamination around SSFL, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. The data and analyses in this EIS indicate that all of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

420-2

DOE acknowledges your preference for full cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

Commenter No. 421: Lauren Dionne

I would like to urge the department of energy to push for a complete remediation of the Santa Susana site. Leaving toxic chemicals behind is an environmental and health disaster waiting to happen. What if it was one of your children that were effected by a cancer that is linked to local area half assed clean up attempts? I can bet that you would make an effort to ensure that future generations do not have to deal with the ramifications of leaving toxic chemicals 'dormant'. The sound and water conservation is absolutely the least of the worries at that site, and should not be the reason behind leaving toxic chemicals unchecked. With the runoff into the Los Angeles River and the Santa Ana winds blowing the topsoil around, it is an ongoing environmental disaster.

Lauren Dionne

421-1

421-1 DOE acknowledges your preference for complete remediation of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

421-2

421-3

421-2 DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities. In response to comments, DOE has added a quantitative evaluation of onsite worker and offsite resident impacts for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS.

421-3

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 422: Molly Thatcher

My name is Molly Thatcher and I am a resident of Thousand Oaks raising 3 young children. I'm writing you today because there needs to be a full clean up done at the Santa Susana Field Site. It's time that measures are taken to have this toxicity removed. The area surrounding is full of families and this potential hazard is unnecessary. Women in the east Ventura County communities of Thousand Oaks, Simi Valley, and western Los Angeles County had invasive cancer rates of 10 percent to 20 percent higher than the rest of California. How many more people need to suffer and even die due to negligence? How many more law suits? How much time and money has been wasted already because of this? Others are hesitant to move to Simi Valley because they have heard of the higher cancer risks. Let's make a better future for all Ventura County residents and clean the Santa Susana Field Site. Thank you for your time.

Molly Thatcher

422-1

422-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

422-2

422-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. The data and analyses in this EIS indicate that all of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 423: Lauren Sullivan

I am concerned regarding the increased cancer and other diseases near the toxic spill site. I think more research needs to be done to prove the site safe/ clean the site.

Lauren Sullivan

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423-1 DOE acknowledges your concerns and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE’s evaluation in this EIS indicates that all of the action alternatives are protective of public health and safety and the environment.

DOE has extensive knowledge of the types, locations, and concentrations of both radiological and chemical contaminants in Area IV and the NBZ of the SSFL. This knowledge derives from the years of environmental sampling conducted at the sites by DOE, EPA, and others, resulting in SSFL possibly being one of the most tested of any cleanup site in the country (number of samples per acre). For example, EPA completed its latest radiological characterization study at SSFL in 2012, for which EPA tested a total of 3,735 soil and sediment samples and 215 groundwater and surface water samples. EPA described this study as “one of the most comprehensive technical investigations every undertaken for low-level radioactive contamination” (EPA 2012).

DOE will remediate Area IV and NBZ, the portions of SSFL for which it is responsible, in consideration of this detailed information as augmented by additional information that may be obtained during the remediation process. DOE’s purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in a proper cleanup of those areas of SSFL for which DOE is responsible, Area IV and the NBZ, and be protective of human health and the environment.

423-2 DOE acknowledges your concern about cleanup of SSFL. DOE’s purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 424: Lisa Hothan

If there is any reasonable doubt (even the tiniest) this matter needs to be handled. You have a very close community begging for your attention. It seems harder to ignore it, then to just offer them what they are asking.

Lisa Hothan

424-1

424-1

Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

Commenter No. 425: Anonymous

Do what's right and clean up for our future. Provide resolution to those affected. Put yourself in their shoes and create a better way of life for everyone.

Anonymous

|| 425-1

|| 425-2

425-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

425-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 426: Amber Saniatan

Please clean this site up!! Think about the health of our children. Think about if these were your children or grandchildren. Wouldn't you want to do everything you could to make the place they live a safe and healthy environment??? Please do the right thing and get this place cleaned up for our kids.

Amber Saniatan

426-1

426-2

426-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

426-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 427: Tisha Banker

As a nearby resident with 2 small children, I beg you to clean the site 100%. I'm not a doctor, but from everything I've read, I am terrified for my own children and heartbroken for the families whose children have been affected by these rare cancers. Please do the right thing. Imagine it was your child. Please.

Tisha Banker

|| 427-1
|| 427-2

427-1 DOE acknowledges your concern about a 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

427-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE's purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated are protective of public health and safety and the environment.

Commenter No. 428: Concerned Mom

Clean up the Santa Susana WASTE. Our children are dying of cancer because of it. This is NOT acceptable. Ever. Hundreds of innocent children and adults too are dying because you refuse to clean up the waste.

Concerned Mom

|| 428-1
|| 428-2

428-1 DOE acknowledges your concern about cleanup of SSFL waste. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

428-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. The data and analyses in this EIS indicate that all of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 429: Anonymous

Dear Ms. Jennings.

I appreciate the opportunity to provide comment on the SSFL Area IV EIS I support a cleanup of the site to a risk-based standard that is fully protective of public health. I do NOT support alternative that increase, rather than decrease, the threat to the public health, unnecessarily destroy wildlife and habitat, and threaten important cultural resources. A risk-based clean-up of SSFL Area IV properly balances all needs, and achieves conservation goals of protecting wildlife, including more than 138 observed bird species. As open space is increasingly developed in and around the Los Angeles area, a large undeveloped area like the SSFL -- which is guaranteed by The Boeing Company, which owns 85% of the site, to remain undeveloped -- is increasingly precious to the wildlife that we all value. Other alternatives proposed in the EIS involve transporting large amounts of contaminated soil on public streets and highways -- many years' worth of trucks hauling away many hundreds of thousands, if not millions, of cubic yards and supposedly replacing them with better soil from an, as yet, undetermined and, probably, non-existent, source with little or no consideration for natural, cultural, and historical resources. Such proposals are unnecessarily destructive and expensive. More, they are inconsistent with cleanups implemented elsewhere. These cleanups have been shown sufficient in achieving cleanup goals, shown to be fiscally effective, protective of public health, and importantly, preserves open space. Thank you for the opportunity to provide these comments.

Anonymous

429-1

429-1

DOE acknowledges your support for a risk-based standard applied to cleanup. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also note that DOE does not own the property in Area IV or the NBZ and cannot determine the ultimate land use for the property. As discussed in Chapter 1, Section 1.5, of this Final EIS, the property owner, Boeing, intends to preserve the land as open space for the public's benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

Commenter No. 430: Sarah Velazco

Please clean it up! This is very sad and negligent!

Sarah Velazco

|| 430-1

430-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 431: Stephen Wolfe

As a resident of Ventura County and as a parent and especially grandparent, I am appalled that the Department of Energy has recently decided not to uphold its 2010 agreement to perform a thorough cleanup of the Santa Susana Field Lab site. I do not support the DoE's alternative plans, which would leave a large percentage (or perhaps nearly all) of the contaminants on the site to decompose for an additional 70 years. I am very concerned about the close proximity to my children of the SSFL's well-documented toxic and nuclear waste, and I am concerned about the long-term effects that waste may have on their health and quality of life. The DoE has announced these plans to renege on its commitments despite preliminary evidence of a pediatric cancer cluster in the area around the site, and has refused to conduct more research into such health impacts. I ask the DoE to fulfill its 2010 commitments to a full cleanup of the SSFL site. Thank you.

Stephen Wolfe

431-1

431-1 DOE acknowledges your preference for a thorough cleanup of SSFL in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. This Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

431-2

Please also note that in Chapter 2, Section 2.3.2, of this EIS, DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique was used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

431-1
cont'd

431-2

431-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this

Commenter No. 431 (cont'd): Stephen Wolfe

CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The most up-to-date data available about contamination in Area IV and the NBZ are summarized in this EIS and included in the cited references (e.g., *Chemical Data Summary Report, Santa Susana Field Laboratory, Ventura County, California* [CDM Smith 2017] and *Final Radiological Characterization of Soils Area IV and the NBZ* [HGL 2012b]).

DOE has not announced plans to renege on its commitments. What DOE has done is prepare this EIS to evaluate alternatives for accomplishing the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. For soil remediation, those alternatives included the Cleanup to AOC LUT Values Alternative as well as alternatives that establish cleanup levels based on risk and the future use of SSFL of those portions. Using the most current data available, DOE performed the analyses in Chapter 4, Section 4.9, of this EIS, which indicate that all of the action alternatives evaluated in this EIS are protective of public health and the environment.

Establishing and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 432: Janet Neuwalder

Deal with this. It is mandatory to take responsibility and clean up the site. Do not leave the community, our local area, and Earth in jeopardy. Just because the tax payers can not see it, does not mean it is not real or happening and affecting us all. Be responsible. Do not ignore or abandon the problem.

Janet Neuwalder

432-1

432-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 433: Shannon Lopez

While I have recently moved to nearby Oxnard, I grew up in Moorpark and know countless survivors and victims of cancer, including a large number of childhood cancers. I am appalled that the Department of Energy has recently decided not to uphold its 2010 agreement to perform a thorough cleanup of the Santa Susana Field Lab site, including affected soil and groundwater. I do not support the DoE's alternative plans, which would leave a large percentage (or perhaps nearly all) of the contaminants on the site to decompose for an additional 70 years. I am concerned about the long-term effects that the toxic waste may have on the health and quality of life; pediatric cancer has disrupted and in some cases destroyed families across Simi Valley and Moorpark. The DoE has announced these plans to walk away from its prior commitments despite preliminary evidence of a pediatric cancer cluster in the area around the site, and has refused to conduct more research into such health impacts. I ask the DoE to fulfill its 2010 commitments to a full cleanup of the SSFL site as soon as possible so that this area no longer has to bear the brunt of the close proximity to this dangerous site. Thank you.

Shannon Lopez

433-1

433-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

433-2

433-1
cont'd

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The most up-to-date data available about contamination in Area IV and the NBZ are summarized in this EIS and included in the cited references (e.g., *Chemical Data Summary Report, Santa Susana Field Laboratory, Ventura County, California* [CDM Smith 2017] and *Final Radiological Characterization of Soils Area IV and the NBZ* [HGL 2012b]).

433-2
cont'd

DOE has not announced plans to walk away from its commitments. What DOE has done is prepare this EIS to evaluate alternatives for accomplishing the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. For soil remediation, those alternatives included the Cleanup to AOC LUT Values Alternative as well as alternatives that establish cleanup levels based on risk and the future use of SSFL of those portions. Using the most current data available, DOE performed the analyses in Chapter 4, Section 4.9, of this EIS that indicate that all of the action alternatives evaluated in this EIS are protective of public health and the environment.

Establishing and funding of additional epidemiological studies are beyond the scope of this EIS.

433-2

433-2 DOE acknowledges your preference for a thorough cleanup of SSFL in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates

Commenter No. 433 (cont'd): Shannon Lopez

the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also note that the comment about leaving large quantities of contaminants to naturally decompose over 70 years is inaccurate. In Chapter 2, Section 2.3.2 of this Final EIS, DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique was used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

Commenter No. 434: Albana Nito

I am a new resident in Moorpark and I feel horrified for the life of my kids to continue to live in this area. Please help to make the right decision to clean up 100% the chemical and nuclear toxics. I am a chemist and I know very well the impact on the life of people that lives near this area is huge and unseen. Please make the right decision. Every day the tragedy can knock in our doors! Thank you

Albana Nito

|| 434-1
|| 434-2
|| 434-1
|| cont'd

434-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

434-2 DOE acknowledges your preference for 100 percent cleanup of chemical and nuclear toxics. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 435: Anette Power

It is imperative for the Department of Energy, NASA and Boeing to do what they promised and conduct a thorough cleanup of the toxic contamination at the Santa Susana Field Lab site!! I want more studies to see how many cancer cases are linked to this toxic material already. There is evidence that there is a pediatric cancer cluster in the community of Simi Valley and the greater Conejo Valley. As a resident of Conejo Valley, and a parent, and the aunt of a child who died of infant acute leukemia this is of course a very real risk, one that has to be mitigated at any economic cost! Sincerely,

Anette Power

435-1

435-1 DOE acknowledges your preference for a thorough cleanup of toxic contamination at SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

435-2

435-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 436: Tanya Hopper

I believe this needs to be cleaned up because it's defiantly affecting the people in the area. My husband was diagnosed with colon cancer in June of 2016 at the age of 31. He lived in Simi Valley off of tapo canyon for years for at least 20 years and now has cancer. He would play and hike frequently on the premises. He had friends as a kid that had thyroid cancer. This absolutely needs to be taken seriously and cleaned properly. There are way too many kids that are suffering and Young adults and young families that are suffering.

Tanya Hopper

|| 436-1

436-2

436-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

436-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about proper cleanup of SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 437: Ann Sturman

As a resident of the Conejo Valley and as a parent who sent our children to Alonim Camp at Brandeis Bardin, I am appalled that the Department of Energy has recently decided not to uphold its 2010 agreement to perform a thorough cleanup of the Santa Susana Field Lab site. I do not support the DoE's alternative plans, which would leave a large percentage (or perhaps nearly all) of the contaminants on the site to decompose for an additional 70 years. I am very concerned about the close proximity to my children's camp of the SSFL's well-documented toxic and nuclear waste, and I am concerned about the long-term effects that waste may have on their health and quality of life. The DoE has announced these plans to renege on its commitments despite preliminary evidence of a pediatric cancer cluster in the area around the site, and has refused to conduct more research into such health impacts. I ask the DoE to fulfill its 2010 commitments to a full cleanup of the SSFL site. Thank you.

Ann Sturman

437-1

437-1 DOE acknowledges your preference for a thorough cleanup of SSFL in accordance with the 2010 AOC. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

437-2

Please also note that the comment about leaving large quantities of contaminants to naturally decompose over 70 years is inaccurate. In Chapter 2, Section 2.3.2 of this Final EIS, DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique was used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

437-1 cont'd

437-2

DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area

Commenter No. 437 (cont'd): Ann Sturman

IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The most up-to-date data available about contamination in Area IV and the NBZ are summarized in this EIS and included in the cited references (e.g., *Chemical Data Summary Report, Santa Susana Field Laboratory, Ventura County, California* [CDM Smith 2017] and *Final Radiological Characterization of Soils Area IV and the NBZ* [HGL 2012b]).

DOE has not announced plans to renege on its commitments. What DOE has done is prepare this EIS to evaluate alternatives for accomplishing the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. For soil remediation, those alternatives included the Cleanup to AOC LUT Values Alternative as well as alternatives that establish cleanup levels based on risk and the future use of SSFL of those portions. Using the most current data available, DOE performed the analyses in Chapter 4, Section 4.9, of this EIS that indicate that all of the action alternatives evaluated in this EIS are protective of public health and the environment.

Establishing and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 438: Anonymous

I am a 62yr old thyroid cancer survivor. I grew up within 10 miles of the site. Several other Valley cousins and friends have had various forms of cancer. Please consider future generations and keep your promise to clean up this site. Think about YOU R children. Thank you.

Anonymous

438-1

438-1 Thank you for your comment. It has been included in the Administrative Record for this EIS.

438-2

438-2 DOE acknowledges your preference for cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 439: Joey

As a mother in Ventura county and Conejo valley, I am extremely disappointed that the DoE has announced plans to renege on its commitments despite preliminary evidence of a pediatric cancer cluster in the area around the site, and has refused to conduct more research into such health impacts. I ask the DoE to fulfill its 2010 commitments to a full cleanup of the SSFL site. Thank you.

Joey

439-1

439-1

DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

439-2

DOE has not announced plans to renege on its commitments. What DOE has done is prepare this Final EIS to evaluate alternatives for accomplishing the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. For soil remediation, those alternatives included the Cleanup to AOC LUT Values Alternative as well as alternatives that establish cleanup levels based on risk and the future use of SSFL of those portions. Using the most current data available, DOE performed the analyses in Chapter 4, Section 4.9, of this EIS, which indicate that all of the action alternatives evaluated in this EIS are protective of public health and the environment.

Establishing and funding of additional epidemiological studies are beyond the scope of this EIS.

439-2

DOE acknowledges your preference for full cleanup of the SSFL site in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 440: Victoria Jacobsen

As a mother in Ventura county and Conejo valley, I am extremely disappointed that the DoE has announced plans to renege on its commitments despite preliminary evidence of a pediatric cancer cluster in the area around the site, and has refused to conduct more research into such health impacts. I ask the DoE to fulfill its 2010 commitments to a full cleanup of the SSFL site. Thank you.

Victoria Jacobsen

440-1

440-1

DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

440-2

DOE has not announced plans to renege on its commitments. What DOE has done is prepare this Final EIS to evaluate alternatives for accomplishing the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. For soil remediation, those alternatives included the Cleanup to AOC LUT Values Alternative as well as alternatives that establish cleanup levels based on risk and the future use of SSFL of those portions. Using the most current data available, DOE performed the analyses in Chapter 4, Section 4.9, of this EIS, which indicate that all of the action alternatives evaluated in this EIS are protective of public health and the environment.

Establishing and funding of additional epidemiological studies are beyond the scope of this EIS.

440-2

DOE acknowledges your preference for full cleanup of the SSFL site in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 441: Anonymous

Hello. PLEASE, you must clean up the Santa Susana Field Lab! I grew up just north of the intersection of Topanga and Roscoe... and my step father died at age 63 of Salivary Gland cancer. Additionally one of my neighborhood friends suffered Thyroid cancer at a very young age. I now live in Simi Valley and the toxins at this location continue to be of great concern to me. This mess MUST be cleaned up immediately. That is has taken this long is a travesty. PLEASE get this done ASAP! Thank you.

Anonymous

|| 441-1

|| 441-2

|| 441-1
cont'd

441-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a ROD pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b])

DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

441-2 DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 442: Sheriden Mansfeld

Please require Boeing to clean up the site. Tests have proven that there are toxic substances in the soil. The Conejo Valley is a beautiful community. My parents moved to Oak Park in the 80's not knowing about the nuclear waste. I live with my family in Agoura Hills and I am scared for the safety of my children everyday. I won't let them grow vegetables in our backyard because of my fear of toxic chemicals leaching into the food. I'm scared of drinking our filtered tap water because of what may be leaching into our water. My best friends mother was recently diagnosed with non-hodgkin lymphoma, which is due to radiation exposure. She has lived in Westlake Village for 40 years. Please make them clean up the mess they inherited. How many innocent children need to die before you do something about it. What is more important, children's safety or a group of wealthy executives. This clean up will leave a minuscule dent in their financial well being. Trump plans to increase military spending and the company will make up for any loss here in a minute. Meanwhile, you will have improved the health of so many people. It seems like a very easy decision. Thank you.

Sheriden Mansfeld

|| 442-1

442-1 DOE acknowledges your concern about cleanup of SSFL. Because DOE, rather than Boeing, has the responsibility for remediation of Area IV and the NBZ, DOE has prepared this Final EIS to address the completion of cleanup within these portions of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

442-2

442-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concern about toxic chemicals within food and water and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

442-3

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

442-3

Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. Financial activities of Boeing and other companies are outside the scope of this EIS. DOE is funded by Congress as part of the Federal government budgeting process.

Commenter No. 443: Peter Nicholson

Golden Rule pretty much applies here. Would the decision makers that desire to turn their backs on this long standing disaster buy a house anywhere near this cancer causing space? Would you want your pregnant wife drinking the water, breathing the air and being exposed to all this nastiness? Are you ready to raise a special needs child? Have you been to the schools in the area and spent the day with all the special needs kids? The obvious answer is No. So how about be a decent human being and continue to fix this till it's truly fixed? Is it so hard to do the right thing?

Peter Nicholson

443-1

443-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 444: Jenna Cittadino

It is absolutely necessary to clean up this area. Shame on Boeing for putting residents lives' at risk for years and for destroying the natural environment! The community of Oak Park and Agoura Hills is frightened about the situation and appalled at the lack of concern of Boeing for taking responsibility for its actions.

Jenna Cittadino

|| 444-1
|| 444-2

444-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

444-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. Please note that there are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of this work. Each of the three parties is responsible to remediate the areas where its work was performed. The focus of DOE's actions and the purpose of this EIS are to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 445: Anonymous

This ongoing issue needs to be dealt with immediately. Over 400,000 residents live within seven miles of this hazardous site. The health and well being of these residents is at risk. It is shameful that this has not already been taken care of. A date was set 10 years ago, a promise was made that the clean up would be completed by 2017 and at this point it has yet to even begin. Please take action now to ensure that residents of this area will no longer be in danger.

Anonymous

445-1

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD for accurate information about offsite contamination and to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

445-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

As discussed in Chapter 1, Section 1.3, of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Cleanup will continue following completion of these actions.

445-2

DOE acknowledges your concern about cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on

Commenter No. 445 (cont'd): Anonymous

Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to completion of cleanup by 2017, please refer to Chapter 2, Section 2.2.3 of this EIS. In addition, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible). The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). The completion of both the CEQA and NEPA processes and certain regulatory actions must occur before DOE can complete the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. The regulatory actions required include the following: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

Commenter No. 446: Loren Gmachl

As a resident of Ventura County, I am appalled that the Department of Energy has recently decided not to uphold its 2010 agreement to perform a thorough cleanup of the Santa Susana Field Lab site. I do not support the DoE's alternative plans, which would leave a large percentage (or perhaps nearly all) of the contaminants on the site to decompose for an additional 70 years. I am very concerned about the close proximity to our county's children of the SSFL's well-documented toxic and nuclear waste, and I am concerned about the long-term effects that waste may have on their health and quality of life. The DoE has announced these plans to renege on its commitments despite preliminary evidence of a pediatric cancer cluster in the area around the site, and has refused to conduct more research into such health impacts. I ask the DoE to fulfill its 2010 commitments to a full cleanup of the SSFL site. Thank you.

Loren Gmachl

446-1

446-1 DOE acknowledges your preference for a thorough cleanup of SSFL in accordance with the 2010 AOC. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

446-2

446-1
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Please also note that the comment about leaving large quantities of contaminants to naturally decompose over 70 years is inaccurate. In Chapter 2, Section 2.3.2, of this EIS, DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique were used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

446-2

DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts" and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to

Commenter No. 446 (cont'd): Loren Gmachl

Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The most up-to-date data available about contamination in Area IV and the NBZ are summarized in this EIS and included in the cited references (e.g., *Chemical Data Summary Report, Santa Susana Field Laboratory, Ventura County, California* [CDM Smith 2017] and *Final Radiological Characterization of Soils Area IV and the NBZ* [HGL 2012b]).

DOE has not announced plans to renege on its commitments. What DOE has done is prepare this EIS to evaluate alternatives for accomplishing the cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. For soil remediation, those alternatives included the Cleanup to AOC LUT Values Alternative as well as alternatives that establish cleanup levels based on risk and the future use of SSFL of those portions. Using the most current data available, DOE performed the analyses in Chapter 4, Section 4.9, of this EIS, which that indicate that all of the action alternatives evaluated in this EIS are protective of public health and the environment.

Establishing and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 447: Sharon Hanson

Whatever mess you made, you need to clean it up. We all must be responsible for damage to the environment. We only have one earth. Thanks

Sharon Hanson

447-1

447-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 448: Roger Allen Soto

Just try to preserve all Chumash and Rocket history that is left my father worked on top of the hill along with other great people

Roger Allen Soto

|| 448-1

448-1

It is DOE's mission to leave DOE's portion of SSFL in a condition that is protective of human health and the environment. This includes preserving the history of SSFL to the extent possible. Section 106 of the NHPA requires that DOE avoid, minimize, or mitigate adverse effects to historic properties, and NEPA requires mitigation of significant impacts. DOE is consulting with DTSC regarding cultural resources that may be exempted from cleanup while protecting human health. DOE also is developing an NHPA Section 106 Programmatic Agreement in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC that will describe the steps necessary to achieve this end.

Commenter No. 449: Stephanie

I am requesting that you move on this and do the clean up that is necessary for our community's safety. Having been a homeowner here for 30 plus years I have watched many close friends suffering from increased symptoms of rheumatoid arthritis. And not just older people but the children of friends. I am also concerned because there are Chumash cultural sites in this area that are inaccessible to the people who value and hold these places as sacred. It is time to start valuing the land we live on and try to work together to restore what has been damaged and to carefully proceed when new ideas for certain developments come up. In spite of the current political climate there are many who would agree with my statement. I am grateful that California as a state is working to maintain its integrity when dealing with environmental issues. Thank you for opening this up to the public for comments.

Stephanie

|| 449-1

|| 449-2

|| 449-3

449-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

449-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

449-3 DOE currently cooperates with Boeing, the landowner, to provide access to Area IV and the NBZ for Native American traditional uses and access to traditional resources. Once the cleanup is complete, however, DOE will no longer have responsibility at SSFL. Access or restrictions on access would be arranged through Boeing or through the land trust that will manage the conservation easements set up by Boeing. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b).

Commenter No. 450: Sandra Paperny

I have one question for you, if your children lived anywhere near the Santa Susana Field Lab would you hesitate for a split second to clean up 100% of it? I know the answer already. HELL NO! We bought our beautiful home less than 2 years ago and now that I have learned about the radiation and toxins surrounding it, and I feel forced to sell it this year unless you clean up 100% of that toxic site. I'm not alone. I know thousands of other parents who are doing the same now that this issue has been brought to light. Who in their right mind would put their babies in any kind of cancerous risk! It brings me to tears thinking about the children that are being exposed to radiation and those that are suffering because of that horrific disaster so many years ago. This is the greatest nation in the world, yet you would deliberately ignore the beautiful San Fernando Valley. We are a very dense, upper income, LA suburb and I demand that you clean up the Santa Susana Field Lab quickly and properly!

Sandra Paperny

450-1

450-1 DOE acknowledges your preference for 100 percent cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

450-2

450-2 As referenced by the comment, the SRE accident occurred many years ago. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

450-1
cont'd

DOE acknowledges your concerns about risks of cancer and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 451: Jennifer Moore

Hello, I wrote the following letter to Melissa Bumstead, an advocate for clean up of SSFL in our community. She suggested sharing the letter with you guys in hopes that you could see the impact and fear many members living here are feeling/have felt about the SSFL still having contaminants on site. I beg of you as a mother to please do a full clean up. We love our community, our home and Simi Valley, but if my family is at risk and nothing is to be done I will do everything in my power to protect them even if that means leaving. Thank you, Jennifer Moore Hi Melissa, I am a resident of Simi Valley, east Simi, to be precise. My husband and I bought a home here in 2015 when I was 8 months pregnant with our son. We had been living in west Los Angeles prior to be close to my husbands job. In 2015 we decided we wanted to raise our son in a quiet, safe community and chose Simi (it was a reasonable commute). I am now 3 months pregnant with our second child and just stumbled upon the information you have been providing the community about the Santa Susana Field Laboratory. I feel stupid now thinking back on signing documents with our real estate agent. She said a few words regarding the incident at the SSFL, but also the year it occurred and we didn't ask any questions or do any research on what in the world she had briefly mentioned since it seemed like it occurred too long ago to possibly affect us. I am now sick to my stomach almost every day since I've done research on this following the information you've given. We love to garden and have planted fruits and vegetables extensively in our backyard. I'm cringing at the fact that our fridge has been due to change its water filter for who knows how long and water is all my son and I drink! I'm terrified of the harm my family could someday endure because of where our home is located. I'm even more terrified of the thought of losing any one of them prematurely due to this. I have signed the petition on change.org and written them for a full clean up like you've suggested, we are going to change the water filter on the fridge... my question to you mother to mother though is, should we leave? Should we take a hit selling our home and try and relocate to Valencia or another outskirt that is safer and my husband could still commute to the city? I'm losing sleep over this and I just feel like time is of the essence with these children coming down with cancers at such a young age. I don't know what to do and I'm scared. My heart goes out to you and the strength that you have to fight this battle with your daughter and I applaud all of the work you are doing with the community.

Jennifer Moore
Local Resident of East Simi Valley

451-1

451-1 DOE acknowledges your concern about a full cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

451-2

451-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. To address your concern about your drinking water, all water providers perform routine characterization of the water they supply and will provide a copy of a report on water quality upon request.

451-2

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 452: Anonymous

To Whom it May Concern, I am a former resident of the Conejo Valley, and would like to interject my voice of concern on the Santa Susana cleanup plans. I am baffled that corporations are becoming a sense of our communities to the extent of not removing toxic chemicals. My father used to work for Edwards Airforce Base, and I dare say that Boeing has the surplus money to pay for this cleanup...but don't go down the accounting trail to see how much they contribute to such causes, because Boeing hires people just for the sole purpose of confusing those who inquire about their checks and balances. And I am not talking about an accountant, I am talking about accountability, or lack thereof. I believe that these soil standards should be investigated by an unknown independent party sanctioned by our government, funded by the waste contributors. I want to see hard data on this! You can't even get this when looking at most utilities websites! Please clean up the soil! Implement fees for violating codes, but don't adjust the codes around the fees. Thank you.

Anonymous

452-1

452-1

DOE acknowledges your concern about cleanup of toxic chemicals of soil. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

452-2

452-3

452-2

Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. The activities of Boeing are outside the scope of this EIS. DOE is funded by Congress as part of the Federal government budgeting process.

452-1
cont'd

452-3

The soil standards were established by California DTSC. Any comments regarding the standards should be addressed by DTSC.

Commenter No. 453: Kristine Hatton

It is unacceptable to do anything less than a 100% clean up to the site.
You owe it to the children and families living in and around Simi Valley.

Kristine Hatton

|| 453-1

453-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 454: Jenna

This needs to be cleaned up 100%... do the right thing!!!!

Jenna
Moorpark College

|| 454-1

454-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 455: Ryann Moresi

My name is Ryann Moresi. I have lived in Thousand Oaks for 22 years. I am contacting you in regards to the Santa Susana Field Lab. As a resident and a parent I am very concerned about the Santa Susana Field Lab's toxic and nuclear waste being in close proximity to my children, and I am concerned about the long-term effects it may have on their health and quality of life. I have had a few friends who's children has tragically suffered from cancer from contaminants from this site. I have known about the SSFL meltdown for 3 years and I am appalled that the Department of Energy has recently decided not to uphold the 2010 AOC and their promise to do a complete cleanup of the site. I do not support their alternative plans that would leave as much as 39%, 91% or 99% of the contaminants on the site to naturally decompose for an additional seventy years. I am appalled by the fear tactics the DOE is using to convince our community that the clean up would be more harmful to us than the remaining contaminants. They have refused to consider using less populated roads and want to truck the contaminants 60 miles through our city instead of utilize local rail stations. Finally, I am deeply concerned that no studies have been done on the pediatric population to date. We have preliminary evidence of a pediatric cancer cluster in the area but this information is not being considered by the DOE. As a parent I find this deeply troubling and I would like more research before the site is declared "safe" by the DOE. I have considered moving far away from here because of the SSFL contaminants and out of fear of safety for our children. I ask that you uphold our desire to see a full clean up of the SSFL site. I appreciate your time and involvement on my, and my children's behalf.

Sincerely,

Ryann Moresi

455-1

455-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information on contamination in the area and to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

455-2

455-2 DOE acknowledges your preference for a complete cleanup of SSFL in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

455-3

455-1
cont'd

455-2
cont'd

Please also note that the comment about leaving large quantities of contaminants to naturally decompose over 70 years is inaccurate. In Chapter 2, Section 2.3.2, of this EIS, DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique was used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

455-3

Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, the EIS

Commenter No. 455 (cont'd): Ryann Moresi

evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this EIS provide details of the transportation risk analysis.

Commenter No. 456: Shannon Parsons

This needs to be 100% cleaned up. Anything else is unacceptable. We should not have to worry about our children being at risk simply because we live near the site.

Shannon Parsons

456-1

456-1

DOE acknowledges your concern about 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 457: Christina Stalboerger

I want the site cleaned up 100%, not to an “acceptable level”.

Christina Stalboerger

|| 457-1

457-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 458: Anonymous

Hello, I would like the site cleaned to background levels and would not like the seemingly endless delay on action. Perchlorate has been found seeping out of the site and the impact of the toxins in the air when our winds blow is something we worry about living here. Please clean up this site to 100%.

Anonymous

|| 458-1
|| 458-2
|| 458-1
|| cont'd

458-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

458-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 459: Anonymous

I would like you to follow with your promise in 2010 (called the AOC) to remove 100% of all the nuclear and toxic waste for the Santa Susana Field Laboratory

Anonymous

459-1

459-1

DOE acknowledges your preference for 100 percent cleanup of the nuclear and toxic waste at SSFL in accordance with the 2010 AOC. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 460: Anonymous

I would like you to follow with your promise in 2010 (called the AOC) to remove 100% of all the nuclear and toxic waste for the Santa Susana Field Laboratory

Anonymous

460-1

460-1

DOE acknowledges your preference for 100 percent cleanup of the nuclear and toxic waste at SSFL in accordance with the 2010 AOC. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 461: Anonymous

Please! Something must be done about this!! I'm a new Simi Valley resident with hopes to grow my family here, its such a beautiful city. I'm 7 months pregnant and really considering leaving ventura county. Family and safety first. We need to think about our kids health and the future of Simi Valley.

Anonymous

461-1

461-1

DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 462: Anonymous

Every and all nuclear waste should be cleaned up and removed for the site. No one in the area needs to live in fear that they put their children are going to one day have cancer because of the neglect from the DOE following their promise to properly clean up and protect the citizens in the area.

Anonymous

|| 462-1
|| 462-2

462-1 DOE acknowledges your preference for cleanup and removal of all nuclear waste from the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

462-2 DOE refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of risk of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 463: Allison Stanley

I live at the foothills right below this site and have 2 small children. I am terrified that one of them will be diagnosed with cancer caused by the contamination, and I am not a paranoid person. It is absolutely ridiculous and embarrassing that with all of the ridiculous regulations out there for useless things, that this major issue is being ignored.

Allison Stanley

463-1

463-1 DOE acknowledges your concern and notes that the issue is not being ignored. There are three responsible parties (DOE, NASA, and Boeing) at SSFL who performed work and there are environmental consequences as a result of this work. Each of the three parties is responsible to remediate the areas where its work was performed.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 464: Alexis Jafroodi

Please, please, please! Cleanup of this area is so badly needed for the safety of our children, brothers, sisters, environment! Please do the right thing & clean this terrible toxic area up!

Alexis Jafroodi

464-1

464-1

DOE acknowledges your concern about cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 465: Natallia Liakhava

Parent I requested to remove all nuclear waste 100% from SSFL. I have a little daughter that is 3 year old and had been going to day care in Simi Valley since she was 1 year old. And we did not know about such an issue exist. I know how bad it's because I'm holding degree in Nuclear Physics and had been leave 300 km away from Chernobyl Nuclear Plant. Me and my cousin was 4 year old when it's happend. And she got cancer. She is still alive, but went thru chemotherapy. Of course, I don't want my little one and all other kids in near areas experienced such hard time. Remove it all as it was promised!

Natallia Liakhava

|| 465-1

|| 465-2

|| 465-1
cont'd

465-1 DOE acknowledges your concern about 100 percent removal of nuclear waste from SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

465-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 466: Noosha King

I am incredibly concerned knowing more than a handful for children in my nearby community with rare forms of cancer and demand a full cleanup of the toxic waste in our community. Our children deserve to grow up with clean water and soil and without harmful pollutants.

Noosha King

|| 466-1
|| 466-2
|| 466-1
cont'd

466-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

466-2 DOE acknowledges your demand for a full cleanup of toxic waste in the community. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 467: Jenny Watring

Please get this 100% cleaned up ASAP before anyone else has to suffer. Think of the children their our beautiful future. Thank you.

Jenny Watring

|| 467-1

467-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 468: Kristin Buchanan

Please please please think about all of the young children growing up in this beautiful community that their parents have worked so hard to provide for them... and its now tainted by toxic waste. This is unacceptable and needs to be addressed immediately before more people are affected.

Kristin Buchanan

468-1

468-1

DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination in the area and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Cleanup will continue following completion of these actions.

Commenter No. 469: Jenny Rook

Clean up the Santa Susana Field Lab!
Jenny Rook

|| 469-1

469-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 470: Kanchana Allan

Please provide complete clean up of the Santa Susana Field Lab. It's not OK to endanger the lives of hundreds of innocent people.

Kanchana Allan

|| 470-1

470-1

DOE acknowledges your preference for complete cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 471: Isaiah Bolton

Cancer Fit, Inc. We demand a COMPLETE cleanup!
Isaiah Bolton

|| 471-1 471-1

DOE acknowledges your demand for complete cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 472: Gerald Goldman

It appears as though the Jun 17 time frame is being missed. This process needs to accelerate to ensure a more timely clean up.

Gerald Goldman

472-1

472-1

The 2017 date referred to by the commenter was established in the 2007 Consent Order and the 2010 AOC signed by DOE and the DTSC. DOE and DTSC have taken and are continuing actions that are necessary prior to physical work being undertaken to clean up those parts of SSFL for which DOE is responsible, Area IV and the NBZ. Those actions include DOE completing the NEPA process and DTSC completing an environmental impact report (EIR) in accordance with CEQA; The *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Other necessary actions are DOE development and DTSC approval of detailed cleanup plans that reflect the results of the DOE EIS and DTSC EIR. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

Commenter No. 473: Andrea Estes

It is unacceptable that this has not been cleaned up yet. Why is it taking so long?

Andrea Estes

473-1

473-1

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 474: Anonymous

Seriously! Not sure why people can't just do the right thing. Clean it up, it's dangerous!

Anonymous

474-1

474-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 475: Anonymous

You need to clean this mess up!!! 100%!!! People at Hope Chapel are getting cancer and dying! We have continually sent one of our church members to Washington to lobby congressmen about this situation. That was when the Democrats were in power. now our lobbyist says that the Republicans are useless, and don't care about people. Since the Republicans are in power and refuse to work with our representative (Melissa Bumstead} so, YOU need to fix this!!!!!! She was in tears about this change in administration. Our pastor Jeff Fischer's sister died and our usher Ed Hendley's Mother died. The Bumsteads have millions of dollars in hospital bills for their daughter Gracie's cancer, which you need to pay for them. THIS IS TOTALLY IRRESPONSIBLE! She was born near the site and grew up there until she got cancer at 4 years old. Then she had to live at the hospital. That is your fault! We ask that the site is cleaned up 100% and that millions in restitution go to the individuals named in this letter. GOD IS NOT HAPPY WITH YOU! NEITHER ARE THE CHILDREN WHO ARE DYING! CLEAN UP and PAY UP! otherwise you might be going to hell.

Anonymous

|| 475-1

475-1 DOE acknowledges your demand for complete cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also note that the question of restitutions is beyond the scope of the EIS.

|| 475-2

475-2 Thank you for submitting a comment. It has been included in the Administrative Record for the EIS.

|| 475-1
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|| 475-1
cont'd

Commenter No. 476: Anonymous

Covering up the radioactive area would be best. They could pour cement over the area and no more radioactive material will be able to escape the site.

Anonymous

476-1

476-1

Area IV has been subject to numerous prior soil cleanups to remove radionuclide impacted soils (see Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD). What remains today are about 12 locations with elevated radionuclides identified by EPA and DOE and the review of those data by EPA and DTSC. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Onsite disposal options were eliminated from analysis in this EIS because the 2010 AOC does not allow onsite burial or landfilling (excavating and burying) of contaminated debris or soil. Boeing owns the land in Area IV and the NBZ. DOE’s intent is to complete its cleanup responsibilities, then relinquish the land to Boeing’s control. DOE does not want any enduring responsibility for a landfill created on site. In addition, covering the site with concrete would not be consistent with Boeings plans for future open space land use.

Commenter No. 477: Marcia Gould

I have the same questions since this disaster hit our area--why hasn't this been corrected once and for all! Right now, however, I want to know why new construction was allowed at the corner of Valley Circle Blvd. and Roscoe Blvd. without FINAL positive closure on this matter. I contacted the construction company a couple months ago and asked about the contamination under the homes. I was told that the problem had been solved and I would receive information explaining this. Well, months later, I have received nothing. What's happening with the Brandeis-Bardin facility in Simi Valley? Children and adults are at the facility constantly. Some live there. Discovered in the early 1990's and still unsafe, when will the public actually find positive closure--real positive closure??

Marcia Gould

|| 477-1

|| 477-2

|| 477-1
cont'd

477-1 DOE acknowledges your concern about cleanup of SSFL. DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). Cleanup will begin following completion of these regulatory actions.

477-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 478: Brenna Gutell

I am very concerned that the SSFL has not been cleaned up & I think they should do the clean up specified in the law that was passed. I grew up in the valley as did my husband & this concerns us very much. We currently live in Oak Park & have two young children, we are very much concerned at how this has & will impact our health. We want to see a full clean up of this toxic, contaminated land.

Brenna Gutell

|| 478-1

478-1 DOE acknowledges your preference for a full cleanup of the site. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

|| 478-2

|| 478-1
cont'd

As discussed in Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

478-2

DOE acknowledges your concerns and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE’s purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated are protective of public health and safety and the environment.

Commenter No. 479: June Deliberto

Protecting our environment, our land, our water, is very important.
June Deliberto

■ 479-1

479-1 Thank you for your comment. It has been added to the Administrative Record for the EIS.

Commenter No. 480: Rand & Shirley Malmin

SSFL issues start with a 20 cover-up of all the real issues so all of the responsible parties should be held responsible today for all that transpired since 1959. I just read a post from someone you grew up within 2 mi of SSFL; that post included the effects of radiation on the animal life in that area= two headed lizards....etc. My family has been affected by me only 22 years after 1959. I was affected by the radiation that was in the dark black smoke that was caused by the burning of the remains of SSFL debris. My youngest son contracted Leukemia at age 2 [NO LEUKEMIA IN OUR FAMILIES], had chemo & radiation treatments, both of our sons have psoriasis, & my youngest son has psoriasis bad with arthritis so bad he has pain all day every day affecting his ability to stand for most jobs [HE WANTS TO WORK AS LITTLE AS HE CAN] Listen to the magnitude of the reports of cancers in the SIMI area [how close do you want to get to SSFL?]. AND RESPONSIBLE PARTIES ARE SAYING TODAY, "NOTHING WAS WRONG AT SSFL", and want us to believe that the first 20-yr-cover-up was for nothing WRONG at SSFL. Twenty-years later, the 1959 WORST RADIOACTIVE ACCIDENT IN HUMAN HISTORY is admitted. How does great America deal with this? SO FAR, IT HAS BEEN DEALT WITH BY IGNORING THE FACTS!

Rand & Shirley Malmin

480-1

480-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE (and its predecessor agency) has not kept the SRE accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atomic International 1959). The accident was also described in detail in a reactor safety textbook, "The Technology of Nuclear Reactor Safety" published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html.

Commenter No. 481: Christopher C. Perry

I Must say . “Dad had cancer and me too” ! We lived in the Knolls from 1947 to 1989 . Yes the sky lite up quits often. Wasn’t even aware of what poisons they were putting into the ground! I’m sure in Wrong doing have been buried very deep! Very common with the government and it’s agency’s !!

Christopher C Perry
1944

481-1

481-1 DOE acknowledges your concern and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE (and its predecessor agency) has not kept the incidents/accidents at SSFL a secret. For example, the SRE accident was reported to local and National media in an August 29, 1959 news release (Atomics International 1959). The accident was also described in detail in a reactor safety textbook, “The Technology of Nuclear Reactor Safety” published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html.

Commenter No. 482: Chelsea Barrios-Sjoblom

I work in hazardous waste transportation and regulatory compliance. I received my masters in Environmental and Occupational Health from CSUN in 2011. I have lived in West Hills for 33 years and am now raising 2 young children in West Hills. All of these combined make me highly concerned over the SSFL site. For the protection of our community, wildlife, and environment it is necessary that the site be remediate fully.

Chelsea Barrios-Sjoblom

|| 482-1

482-1 DOE acknowledges your preference for full remediation of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 483: Catherine Reyes

None--It is the responsibility of the DOE to clean-up the Santa susana Field Lab Site as determined in 2010. As a community member and a mother, this must absolutely be upheld. The incidence of cancer in our community is way above the national statistics. This is in part due to the toxic presence of harmful elements at the Santa Susana Field Lab site. Clean up must done to protect our community and our children

Catherine Reyes

|| 483-1
|| 483-2
|| 483-1 cont'd

- 483-1 DOE acknowledges your preference for a cleanup of the SSFL site in accordance with the 2010 AOC. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 483-2 DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 484: Rachel Good

This is an absolute disgrace that this has been allowed to go on. A full clean up should be done not some excuse for a cheap way out. People's lives are at risk and numerous people have already been effected. It is so important to me that I would consider moving out of the area. To see the map and the kind of cancers these kids and adults are getting is so scary. This requires a correct cleanup in its entirety.

Rachel Good

|| 484-1

|| 484-2

|| 484-1
cont'd

484-1 DOE acknowledges your preference for a full cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

484-2 Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 485: Anna Cortez

The chemical and nuclear contamination in all of Santa Susana area and affected adjacent areas and watersheds should be permanently cleaned up and brought to safe levels by the soonest possible date.

Anna Cortez

485-1

485-1

DOE acknowledges your concern about cleanup of SSFL and affected adjacent areas and watersheds. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Section 2.7, "Offsite Impacts," of this CRD. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 486: Mark S. Hunter, Pasadena Audubon Society

I support the “risk-based cleanup” as the best choice among the possible cleanup plans when the interests of all the parties, plus the environment itself, are considered.

Mark S Hunter
Pasadena Audubon Society

486-1

486-1

DOE acknowledges your support for a risk-based cleanup. DOE’s purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 487: Leonard Goodman

Before I retired, I had the opportunity to conduct a number of team (EPA, clean up contractor, affected populations' representatives) studies for EPA Superfund Sites in Texas. The planned work was clean up of highly contaminated (toxic hydrocarbons) soils. A deadly detail that often threatened the success of achieving toxic contamination removal was lack of a proven, verifiable method for detecting contamination down to ppm levels. There is no point in planning and claiming to remove toxic material 'A' until only 'x' ppm remain if such success cannot be proven to those who are likely to dispute the claimed success. During the studies I conducted, EPA and contractor representatives were confident the proven, verifiable detection techniques would be available when needed even though they could not identify a potential technique. The attitude was, don't worry about 'minor details'. If a 'minor detail' leads to unsuccessful completion of a critical step, like proving an intended result was achieved, then there is the potential for wasting millions of dollars when a clean up project is halted and/or litigation ensues.

Leonard Goodman

487-1

487-1

It is DOE's plans to only use proven and reliable analytical techniques when it has samples analyzed confirming that it has met project cleanup goals.

Commenter No. 488: Jennifer Aguilar

Please clean up your mess. Innocent children should not pay the price of negligence and bureaucracy.

Jennifer Aguilar

|| 488-1

488-1 DOE acknowledges your concern about cleanup of SSFL. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 489: Cletus Stein

the peace farm It is immoral to not be serious about cleaning up the governments toxic, antihuman wastes. Unless you do this and do it well and completely, our descendents will curse you and all of our generation together. May God have mercy on you,... and us!

Cletus Stein

489-1

489-1

DOE acknowledges your concern about cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 490: Celeste Jale

Dear Ms. Jennings and the Department of Energy,

My name is Celeste Jale and I am a of resident Woodland Hills, California. I request the Department of Energy and NASA uphold the Administrative Order on Consent with the California Department of Toxic Substances Control for a cleanup to “background” levels of the Santa Susana Field Laboratory, signed in 2010, to be completed by 2017. A background level means that 100% of the contamination on the SSFL would be removed to a toxic waste facility. Furthermore, I ask that you desist in using scare tactics to keep residents from demanding a safe and complete cleanup, and turn to common sense and viable methods for success. In the Department of Energy’s DEIS (Draft Environmental Impact Statement) they list the only dangers of the cleanup to be the potential for “truck accidents” or “smog from trucks.” The cleanup will be safe due to the federal, state and local laws that will direct the cleanup to control dust and prevent contaminants from traveling offsite during the cleanup process. There are two service roads that pass little to no homes, yet the Department of Energy says in the DEIS that they will need to take the most heavily populated roads to a rail station sixty miles away. The closest station is only a few miles away, but the DEIS does not mention this as an option. Also, if they use covered conveyor belts (which is a viable option) there wouldn’t need to be as many trucks. Again, these options have been left out of the DEIS. Instead, only the least sophisticated methods have been presented as a scare tactic. For the health of our community and the future children who will be here, use the innovation and science available to us in 2017 and effectively, and safely, remove this contamination immediately.

Thank you for your attention,

Celeste Jale

490-1

490-1 DOE acknowledges your preference for 100 percent cleanup of SSFL in accordance with the 2010 AOC. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

490-2

490-2 DOE’s intent is not to alarm people, but it is true that the more soil that is removed to clean up the site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs between the alternatives. In the case of soil remediation, and using the Conservation of Natural Resources Alternative as an example, leaving more soil, and consequently low concentrations of chemicals and radionuclides on site, reduces the number of truck trips from the site and associated transportation risk and air quality impacts. But, the potential impacts to a site user following cleanup would be highest for this alternative. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, as would be the case under the Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site and increases the transportation risk and air quality impacts. But, the potential impacts to a site user following cleanup would be the lowest for this alternative. Although the cleanup level under the soil remediation action alternatives and scenarios are different, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment regardless of the alternative or scenario. (Please see Chapter 4, Section 4.9 of this Final EIS.)

490-1
cont’d

DOE agrees with the commenter’s statement regarding the cleanup being conducted safely. Regardless of the cleanup alternative selected and implemented, DOE would comply with the laws, regulations, and processes that have been established to protect the public and workers.

Regarding comments related to transportation of waste from SSFL, please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this issue and DOE’s response.

Commenter No. 491: Anonymous

Please do the right thing and do what you would do for your own children. And clean up the whole site 110%. Thank you for your time. Remember this earth is what we have to past down so we need to take care of it. It is all of our responsibility.

Anonymous

|| 491-1

491-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 492: Cindy Toth

As a life long resident of Simi Valley, I am now a 2x cancer survivor. It was in elementary school when we moved here. My family and I have lived and worked here in Simi since 1968. My Father passed at 68 from Lung Cancer, my Mother is also a 2x cancer survivor. None of our was genetic according to the doctors. All different kinds and origins. Please finish the clean up so I can responsibly sell real estate on the south side of Simi. I will not, out of good concepts sell any of the new homes or older existing homes with- in the 5 mile radius that shows an extremely High incidents of cancer and related chemical poisoning. Please get this cleaned up. Simi doesn't need any more sick children or adults.

Cindy Toth
Century 21 Hilltop - Realtor

492-1

492-1 DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS, which presents data on cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

492-2

492-2 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

492-1
cont'd

492-2
cont'd

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 493: Nufar Sharon

It is imperative that the site be cleaned up . For those who live around it, near it, or will eventually live in it, the health risks can be catastrophic. I highly support any and all requirements for decontamination and clean up of the site in order to not affect animals and humans health wise.

Nufar Sharon

493-1

493-1

DOE acknowledges your concern about cleanup of SSFL. DOE’s purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 494: Kelly Segura

You must uphold your commitment to cleanup up all detectable contamination at SSFL.

Kelly Segura

|| 494-1

494-1 DOE acknowledges your preference for a cleanup of all detectable contamination at SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 495: Mary Munoz

Please do a complete cleanup of the area. Children should not have to suffer because you want to save money.

Mary Munoz

|| 495-1

495-1 DOE acknowledges your preference for complete cleanup of the area. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 496: Amy Staskiel

I have read the EIS proposal, and it is a disgrace! I urge you to keep your commitment to the earth and to our communities to cleanup up all of the contamination at SSFL. Anything less is unacceptable.

Amy Staskiel

496-1

496-1

DOE acknowledges your preference for cleanup of all of the contamination at SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 497: Scott Wheeler

Do not break your obligation to clean up all of the nuclear and chemical contamination at the Santa Susana Field Laboratory! I have done the numbers and there is no doubt that some of my friends and family have died because of this.

Scott Wheeler

497-1

497-1

DOE acknowledges your preference for complete cleanup of nuclear and chemical contamination at SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 498: Breanne Steen

As a Simi Valley resident, I stand firm in our request to have 100% clean up at the Rocketdyne site. Please do not let us down.

Breanne Steen

|| 498-1

498-1

DOE acknowledges your preference for complete cleanup of 100 percent cleanup of the Rocketdyne site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 499: Stephanie Lascala

Please properly clean up this site so that our children are no longer being exposed to toxic chemicals, and pollutants. Clean it up 100% NOT under 10% ---- get the correct facts & info ---

Stephanie Lascala

499-1

499-1

DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 500: Erica Watkins

Do what is right. 100% clean up now. You will all sleep better at night knowing that you did the right thing. Do it for the kids. Do it for the healthy future of our community.

Erica Watkins

|| 500-1

500-1

DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 501: Christine Call

Please stop putting lives at risk by not doing the right thing for the residents near the SSFL Area IV EIS. This has been going on way too long.

Christine Call

501-1

501-1

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

With respect to the completion of environmental remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 502: Jason Graf

Anything other than a full and complete clean up of the toxic material at Santa Susana Field Laboratory is unacceptable and a danger to public health in the surrounding communities. The fact that this issue is still being debated is atrocious.

Jason Graf

502-1

502-1

DOE acknowledges your preference for a full and complete cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 503: Angie Moore

To the DOE - I hope that you will live up to your promise from many years ago to completely clean up the nuclear & chemical waste at the Santa Susanna Field Laboratory. Those of us who live in the area have worked together for so long to get closure on this problem that poses serious safety & health problems for the residents of this area. The time to get the job done is NOW! The citizens of the surrounding communities deserve to be spared further worry about this mess in our backyard. Please do the right thing and clean up the SSFL!

Angie Moore

|| 503-1
|| 503-2
|| 503-1
|| cont'd

- 503-1 DOE acknowledges your preference for complete cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 503-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 504: Sharone Rotkopf

uphold your commitment and clean this mess up! We have two little baby girls that were born 4 months ago and we do not want to live with the threats that exist due to the careless attitude that has been displayed regarding this clean up!

Sharone Rotkopf

504-1

504-1

DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 505: Kelly Hill

Please clean up the Santa Susana Field Lab Area. This has gone on long enough. It has polluted this area long enough!! Thanks,

Kelly Hill

|| 505-1

505-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 506: Matthew Hill

I want you to clean up the Santa Susana Field Lab area .It has ruined my enjoyment of the beautiful area. Many have Cancer. You can stop it!!Clean it up !!!

Matthew Hill

|| 506-1
|| 506-2

506-1 DOE acknowledges your concern about cleanup of the SSFL area. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

506-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about cleanup of SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE's purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 507: Ray Hill

Having grown up in this area, I have always been aware of the Santa Susanna Field Lab area. It is time to clean up this area. All the cancer stories that have happened due to this disasterous area. Please clean it up!!
Thanks,

Ray Hill

|| 507-1
|| 507-2
|| 507-1
cont'd

- 507-1 DOE acknowledges your concern about cleanup of the SSFL area. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 507-2 DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 508: Nancy Berry

There is no reason that Rocketdyne cannot clean this area up. It is their responsibility to the community.

Nancy Berry

|| 508-1

508-1 DOE acknowledges your concern about cleanup of the area by Rocketdyne. Rocketdyne is not responsible for remediation of SSFL. The three government and commercial entities responsible for remediation of SSFL are DOE, NASA, and Boeing. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 509: Sean Gesell, Gesell Industries

It is imperative that the DOE not break its obligation to clean up all of the nuclear and chemical contamination at the Santa Susana Field Laboratory! The health of our children depends on this responsible action.

Sean Gesell
Gesell Industries

509-1

509-1

DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 510: Richard S. Zive

It is with great sadness that I read the agreed to terms of the ruling to clean up the Santa Susana field lab properties are now being tried to be broken. I have lived in the part of Simi that has been constantly encroached on by ground water contamination from the SSFL. I have watched a neighbor die in the past two years who used to work at the lab. I thought he was in his mid to late 80's but he was actually in his early 70's. I have seen the pockets of cancer in Chatsworth where to many people in a small area were dying from cancers caused by the field lab. Children born with birth defects or stillborn. And now the DOE wants to change the ruling agreement? What kind of animals are running this joke of a "concerned" Government agency? All involved from the DOE should be asked if they would be willing to live in any of the areas that are now listed as "Cancer clusters" caused by the contamination from the Field lab. My guess is none of them would be willing to risk there families to this kind of contamination but the are willing to risk ours. I now question if any of this might have something to do with my daughters death. When we moved into our house in Simi she was fine but after about 10 years in the house she started to develop manic/depression, Paranoia, other mental issues until she accidentally over dosed on her medications at the age of only 27. She was our only child and now I am living with the guilt that I may have moved her into an area that may have poisoned her? Come on can't we get this area cleaned up so no one else has to know the pain and grief that my wife and I plus many other families have already faced? This is a great shame on our State and Country that they would ever consider leaving any contaminated soil on that property. They claim it would cause to much damage to the environment? How much Damage has it done through the contamination? I no longer hear or see any of the mountain Lions or even Bob Cats that I used to hear and sometimes see when I first moved here. What happened to them??? Is it the same fate the spade foot toad is facing? The more I read and wright about this the more I am considering moving not just out of Simi Valley but completely out of the State of California, Where I was born.

Richard S Zive

510-1

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cont'd

510-2
cont'd

510-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

510-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

510-3 DOE refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information on contamination in the area and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 511: Vanessa Renee Keller

It is inhumane what occurred and a sound cleanup of the waste MUST happen..the people demand a cleanup :) I demand a cleanup! :))u

Vanessa Renee Keller

|| 511-1

511-1 DOE acknowledges your concern about cleanup of waste at SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 512: Derinda Douglas

When accidents happen, who is responsible and who pays the price for turning a blind eye? The lack of responsibility by big corporations once again is killing people. I am urging you to uphold your commitment to cleanup up ALL detectable contamination at Santa Susana Field Laboratory site. The contamination that happened so long ago can now be detected into Moorpark. Be responsible please.

Derinda Douglas

512-1

512-1 DOE acknowledges your concern about cleanup of all detectable contamination at SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

512-2

512-2 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 513: Janet Luan

In the interest of the next generation growing up here, please cleanup the mess once and for all.

Janet Luan

|| 513-1

513-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 514: Anonymous

Please clean this area up 100%

Anonymous

|| 514-1

514-1 DOE acknowledges your concern about 100 percent cleanup of the area. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 515: Morene Berlin

Please, please complete a full clean-up of the toxic SSFL. I am considering moving to Simi Valley, but still unsure due to the possible toxicity of this area infiltrating other neighboring communities. A partial clean-up is unacceptable! Please do what is RIGHT and do a complete, thorough clean-up of this toxic area. I am sure you would do the same if your family lived in that area! Thank you.

Morene Berlin

515-1

515-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 516: Anonymous

Clean up the testing fields as promised, that landfill will kill our children || 516-1
Anonymous

516-1 DOE acknowledges your concern about cleanup of the testing fields. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 517: Jennifer Shaw

RE: The Environmental Impact Report for planned PARTIAL remediation of radioactive substances and toxic/hazardous substances in Area IV at the Santa Susana Field Lab: My husband and I bought a home in Simi Valley, northwest of the Field Lab, in 1981. There was a gigantic field across the street from our home and we could see the entire panorama of the Field Lab's northern front face. We lived in that home between 1981 and 1995, with our 2 children who grew up both in utero and on foot there. During that time our home was constantly blasted with dirt from the hills south east of us when the Santa Ana winds would blow. The dirt would come down the chimney, into our cars, our garage, and our back patio where our children played. It is clear to me, now, that radioactive dirt blowing off the Field Lab could be part of the dirt which blew on our home and on us. That potentially radioactive dirt continues to blow on Simi Valley residents and their homes to this day. Mechanically the Area IV blowing dirt is the same as the lead-laden dirt from Exide Technologies which has blown all over East L.A. for years. The information about the mechanics of airborne toxic dirt contamination is well known to DTSC, yet in the Area IV EIR DTSC didn't share what they know about the means of airborne dirt contamination harming nearby humans. DOE, EPA and DTSC all know there are widespread cancer deaths in the communities surrounding the Field Lab. Our family has seen a close friend's mother die of cancer. She lived in a house on Royal Ave at the foot of Meier Canyon in Simi Valley for 30 years. As you know that's north of Area IV. Our personal friend Peggy F, who lived in a house near the bottom of Meier Canyon, also "died young" of cancer. Three of our women friends who live in the Santa Susana Knolls all came down with cancer while living there. Each afternoon the prevailing winds blow the Field Lab's dirt into their neighborhood. I am convinced the contaminated dirt blowing off the Field Lab harmed all of them, and yet the discussion of stopping dirt blowing off site is sorely lacking in the EIR. You environmental regulators don't want to admit it, the communities surrounding the Field Lab have been rife with sick and dying children with childhood cancers. Living downwind of the Field Lab causes those cancers at a rate greater than those in the general population. While you regulators can look at those childhood deaths merely as a number, I want to illustrate to you what soil contamination at the Field Lab blowing in

517-1

517-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

517-2

517-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding your concern about airborne dispersion of contaminants from SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The environmental monitoring program for Area IV is extensive and addresses the potential for the spread of contamination from Area IV to offsite areas. The results of this monitoring program are provided in annual environmental monitoring reports. (Please see http://www.etec.energy.gov/Environmental_and_Health/ASER.html.) Information about this monitoring program can be found at the Energy Technology Engineering Center website (<http://etec.energy.gov>).

517-2

This Final EIS was revised to address the potential for, and possible public impacts from, airborne dispersion of contaminants during remediation activities.

Commenter No. 517 (cont'd): Jennifer Shaw

the prevailing wind brought to just one family living in the hills east of the Field Lab: LOSING SKYLER by Vince Neil, Published in People Magazine October 16, 1995 “IT WAS EARLY APRIL, AND SKYLAR came down with flu-like symptoms, so Sharise kept her home from preschool. It didn’t seem anything to be concerned about. But that night, Skylar doubled over in pain and couldn’t walk. Sharise took her to West Hills Medical Center. At the time, I was away at a pro-celebrity car race. When I returned to the hotel, I got a message to call a friend. He said, “Dude, Sharise is looking for you. Skylar’s in the hospital.” I got a sick feeling as I tracked Sharise down. She was hysterical. She said “Skylar has cancer!” Skylar was rushed into the emergency room and opened up. The doctors thought her appendix had ruptured, but it hadn’t. The problem was in an area behind her stomach, where they removed a tumor the size of a softball. I associated cancer with old people. What could this child have put in her body to get cancer? It took me an hour to get to the hospital. As soon as I saw Sharise’s family crying, my heart sank. Finally, I saw Skylar in intensive care hooked up to tubes and machines. It scared the hell out of me. A few hours after surgery, in her half-sleep, she was talking about Cinderella. She was more awake the next day and very scared. She didn’t know what was going on. She just wanted to know when she was going home. The doctors had told us that Skylar needed to be transferred to Children’s Hospital in Los Angeles, where they could make sure they had gotten all the fragments of the tumor, which had ruptured around her abdomen. All Sharise and I could tell her was, “Soon, honey, you can go home.” A CAT scan indicated tumors on both kidneys; it looked bad. Later that week doctors operated to remove the tumors, but after they opened her up, they decided to leave everything intact and try-saving the kidneys and shrinking the tumors using chemo and radiation. But Skylar remained in a lot of pain. Within a month, despite the treatments, a tumor on her right kidney that would eventually grow to 6½ pounds began pushing her abdomen against her lungs, making it hard for her to breathe. At one point, Skylar said, “Daddy, I’m never going home, am I?” I said, “Of course you are.” Sharise and I never gave up hope. We brought Skylar’s dance clothes and toys to the hospital. We watched videos and sang songs. It was hard, but she recovered from the operation. Finally, even though she was getting shots of morphine for

Response side of this page intentionally left blank.

Commenter No. 517 (cont'd): Jennifer Shaw

the pain, the doctors decided she could go home and do chemo as an outpatient. We brought Skylar to Sharise's house at the end of May. It was the first time in more than a month that she was in her own bedroom, but her stomach hurt constantly. After four days we took her back to the hospital. Doctors found she had a bowel obstruction from the previous surgery—some scar tissue had formed on her intestines and twisted them—and Skylar had her third operation within two months. She said to Sharise, "Mommy, I don't want to die." We reassured her, telling her, "You're going to go to sleep for a little bit, and when you wake up, Mommy and Daddy will be right here." But inside we were really scared. Following the operation, she whimpered, "Dad, please don't let them cut me anymore." What do you tell a child? Skylar's tears ripped at my heart. Meanwhile her breathing got worse, a fast panting that resulted from the right kidney's big tumor pressing against her lungs. Her color was bad. You could actually see bones through her skin. I hated telling her she needed another operation, but there wasn't a choice. The surgeons wanted to remove the right kidney. When they opened her up several days later, they found the cancer had spread to her liver and intestines and the muscles in her back. Removing the monstrous tumor from the right kidney would have caused so much bleeding, Skylar would have died on the table. So the surgeon patched her up and hoped for a miracle. About a week later, on June 3, Skylar stopped breathing. The doctors put her on a respirator and gave her medication that essentially paralyzed her so that she wouldn't expend unnecessary energy. Over the next two weeks she continued to fight. I don't know how. Throughout the ordeal, I've wondered why this happened to someone who never got a chance to live. I've nearly destroyed myself asking if she was being punished for something I'd done. I've blamed myself because cancer runs on my mother's side of the family. When I search for a reason for Skylar's death, it's as if she has opened my eyes to all the suffering other children and their parents are going through. On July 26, Skylar underwent an operation to remove the tumor that had overtaken her body. The doctors explained it was extremely risky, but if she was going to have any chance at beating the cancer, this was it. I had no idea if I was saying goodbye forever. Ten hours later the doctors returned. They had removed the 6½-pound tumor, the size of a football, and had also taken out her right kidney, half

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Commenter No. 517 (cont'd): Jennifer Shaw

her liver, part of her diaphragm, a piece of muscle in her back and the tumor inside her left kidney. She eventually regained consciousness, but about a week later she underwent another operation to deal with a possible infection from the previous surgery. After that, she got worse. Her remaining kidney wasn't working well, and her lungs began failing. The doctors told us she was slipping away. We called our families and told them it was time to say goodbye. Skylar was on painkillers and remained unconscious. I knew she could hear me, though, so before I left that night, I told her I loved her. I had just gotten home when Sharise called. "Her vital signs are dropping," she said. "You'd better come back." I just started crying. Skylar was dying. It took a while for me to get to the hospital. In the meantime, Sharise sat by Skylar's side as "Skylar's Song" played in the background. Finally, Sharise told her, "Don't be scared, sweetie. Go to sleep now. It's all right." Minutes later, Skylar passed away. I got to the hospital 10 minutes after she died. Her little body lay on the bed. I told myself that at least she wasn't in pain anymore, but I've never experienced anything as sad as being in that room. On Aug. 18, Skylar was buried in a tiny pink casket. At the service, we celebrated her life. Since then my girlfriend and I have gone to the cemetery often. I've been sleeping with the blanket Skylar died in because it still smells like her. Nothing's changed at home—her room is exactly the same. But there are too many painful memories, so in November I'm moving to Las Vegas. Immediately after the funeral, I went out of town, running away from reality. But then I couldn't run anymore. I returned to L.A. and started talking to a therapist who has really helped me deal with grieving. Sometimes I think Skylar is still here, and I think I'm insane. But my therapist says that's normal. It's part of letting go and the healing process. If you've never gone through this, it's hard to know what you're supposed to feel. I think of Skylar every day. I know someday the loss won't hurt as much as it does now. But I loved Skylar very much, and that will never go away." IT IS CLEAR THAT PARTIAL REMEDIATION WON'T STOP THE CANCER CAUSING DIRT FROM LEAVING AREA IV. REMEDIATE TO BACKGROUND!

Jennifer Shaw

517-3

- 517-3 DOE acknowledges your preference for remediation to background levels. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 518: Deva Andrews

This area must be cleaned up. Too many have been sicken from it, and it must stop. Please keep your word and protect the people who live in the area.

Deva Andrews

518-1

518-1

DOE acknowledges your preference for cleanup of the area. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 519: Susan Lilly

This site needs to (FINALLY!!!) be completely cleaned and made sure it is safe!!!

Susan Lilly

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519-1

DOE acknowledges your preference for complete cleanup of the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 520: Anonymous

Ms. Stephie Jennings
 NEPA Document Manager
 SSFL Area IV EIS
 US Dept. of Energy
 4100 Guardian St., Suite 160
 Simi Valley, CA 93063

Dear Ms. Jennings,

I am writing this statement to address the concerns I have about the Draft Environmental Impact Statement (DEIS) and how the Department of Energy (DOE) is trying to break out of its commitment to the 2010 Administrative Order on Consent (AOC) and a full cleanup of the SSFL. I specifically want to address the DOE's proposal for a natural attenuation method for soil remediation at SSFL. In the DEIS, DOE claims that there are 150,000 cubic yards of soil where TPH and PAH are the only contaminants, which make the soil amenable for remediation via natural attenuation. They claim it will take up to 15 years for the PAHs and 70 years for the TPH to biodegrade below LUT values. In other words, DOE wants to set aside 150,000 cubic yards contaminated with extremely harmful substances and do nothing to prevent them from migrating into the surrounding area of the SSFL for decades. The 15 and 70 year time frames are cited from CDM Smith 2015b, who gives a range of 0.42 to 69 years for TPH natural attenuation and 5 to 15 years for PAH natural attenuation. These numbers however, are actually taken from a team of researchers at the College of Engineering at the California Polytechnic State University in San Luis Obispo. Led by Professor Yarrow M. Nelson and his team of graduates, the "Nelson studies" of the Cal Poly team are the main bodies of research behind the rates of natural attenuation for TPH and PAH cited by the DEIS. After reading those studies, it is clear that every conclusion points to the fact that natural attenuation is not a solution that works, in fact, the Nelson studies prove that natural attenuation is not a solution at all. The Nelson 2014 study for the Feasibility of Natural Attenuation in the Soil of the Santa Susana Field Laboratory contains several assumptions and errors that make the entire study not applicable for SSFL conditions. Firstly, this study uses calculations with data that is not site-specific to SSFL soil. It is important to point out that

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520-1 DOE acknowledges your preference for full cleanup of SSFL in accordance with the 2010 AOC. Please refer to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

520-2

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to your comment about natural attenuation, in Chapter 2, Section 2.3.2, of this EIS, DOE assumed that about 620,000 cubic yards of soil containing certain hydrocarbons (TPH) could be remediated by monitored natural attenuation, a process that was projected to require about 70 years. If this remediation technique was used for this soil, there would be restrictions on access of the area being remediated to preclude any risk to members of the public.

With respect to your comment about extending the deadline for cleanup past 2017 of Area IV completion of cleanup by 2017, please refer to Chapter 2, Section 2.2.3 of this EIS. In addition, please refer to Chapter 1, Section 1.3, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed

Commenter No. 520 (cont'd): Anonymous

Professor Nelson and his Cal Poly team acknowledge that without access to actual soil samples from SSFL, they make a great degree of forecasting that render the results from their calculations appropriate only for “illustration purposes” (Nelson 2014, 22). Regardless, the team carried forward with the hypothetical calculations and after conducting a literature review on published first-order rate constants for TPH and PAHs to apply to SSFL, the team came up with a median first-order rate of 0.005 ppm/day. In this study, the first-order rate constants are the rates at which contamination naturally attenuates. Compounds that are more reactive/ exposed to the environment degrade faster than those that are more recalcitrant. Aside from the hypothetical numbers that the Cal Poly SLO team used in their sample calculation for the natural attenuation rates in the SSFL soil, there are several factors that the researchers themselves acknowledge make their 70 year prediction unsubstantiated. First, the natural process of weathering, where the environment breaks down the soil, may impede contaminant degradation, by removing the more bioavailable compounds and leaving behind the more recalcitrant ones. This would increase the amount of time for the soil to naturally attenuate. (Nelson 2014, 22). Second, the first-order rate constant that they used may not remain linear considering that “the more easily biodegradable fractions of the hydrocarbon mixture will biodegrade first, leaving the more recalcitrant compounds towards the end” (Nelson 2014, 22). Therefore the claim of 70 years cannot be this exact. The first-order rate constant would vary the amount of time for degradation because it focuses on how fast different compounds degrade. The compounds that would be more difficult to naturally attenuate could take much longer in comparison to the others that degraded first. Third, “some fraction of the hydrocarbons will likely remain sequestered in the soil matrix and unavailable for biodegradation” (Nelson 2014, 22). The study explicitly states that many of the harmful toxins in the soil are probably going to be there for an extremely long amount of time as they are not available for biodegradation! Once again, the impedes the 70 year claim in the DEIS, and demonstrates how the DOE is breaking the agreement with the AOC clean up standards because these compounds could remain in the soil for an infinite amount of time. All of these factors lead the Cal Poly SLO team to conclude their study by disclaiming that “longer remediation times than those calculated may be required at

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an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible). The *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in 2017 (DTSC 2017b). The completion of both the CEQA and NEPA processes must occur before DOE can complete the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

520-2 As stated in this EIS, monitored natural attenuation for soil with TPH is proposed for locations with “low concentrations” of these contaminants. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans.) These would be locations where these chemicals do not pose a risk to human health and the environment, and removal of the low concentrations would do more environmental harm than good. Chapter 2, Section 2.3.2 of this Final EIS for additional information. DOE recognizes that it could apply enhanced biological treatment processes for higher concentrations of TPH chemicals, however those locations are collocated with PCB and metals (for example) and biological treatment would not reduce PCB or metals concentrations to LUT values.

Commenter No. 520 (cont'd): Anonymous

SSFL” (Nelson 2014, 22). The very study that the DOE based its claim on is honestly saying that the time lengths they calculated for natural attenuation are not sufficiently accurate, and SSFL attenuation may take longer than what they calculated. The DOE should not be taking this research and making such a strong claim when the researchers themselves who conducted the study are clearly stating flaws in the science. The CDM Smith 2015b, which the DEIS cited for the 70 years claim, also uses the Nelson 2015c study. This study discusses microcosm experiments conducted with soil samples from Area IV of the SSFL concluded natural attenuation to be an ineffective solution for decontaminating the soil. The study took 9 soil samples from the SSFL soil and EFH concentration were 20-40 times higher than the current clean up goals and PAH concentrations ranged from 87 to 45,139 µg/kg. These ranges are completely hypothetical and are not amendable with the actual values in SSFL. Nonetheless, the study continued and the researchers found that after 8 months, EFH concentrations were 5 times higher “compared to the initial or 4-month samples analyzed by EMAX”. This means that this study tried to see how natural attenuation could lower the values the concentrations, but the researchers ended up finding that the concentrations of these compounds increased. The DOE cannot trust natural attenuation when the research is saying that this method is not only ineffective, but could potentially make the concentrations worse than before! The study claimed that the reason for this difference is “a difference in the data analysis methods between these two laboratories”. As for PAH, concentrations decreased slightly in some soil samples, but they were “not statistically significant”. Even for PAH concentrations, the decrease would not even be sufficient for degrading the toxic compounds at SSFL. Lastly, the original piece cited by the DEIS, CDM Smith 2015b, also cited Nelson 2015a which can be easily summarized by the last sentence of the study: “Although the focus of this investigation was on natural attenuation, the findings suggest that more active bioremediation methods should also be further explained”. Yarrow Nelson himself summarized his work by saying that natural attenuation will not be sufficient for SSFL. Nelson feels that different methods that have “active bioremediation” - meaning, using different organisms to speed up degradation, need to be analyzed. The DOE is putting the people living near SSFL at danger by making outrageous claims, such as

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520-3 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 520 (cont'd): Anonymous

the 70 years for natural attenuation. Yarrow Nelson, the researcher who conducted studies for natural attenuation, clearly states that this would not be a sufficient method for the SSFL site. Furthermore, the DOE is breaking their promise with the 2010 AOC by highly considering natural attenuation methods. SSFL should have already been cleaned by this year, but the DOE has already extended the deadline which is causing people who live near these areas to fall ill. The DOE needs to take responsibility and uphold the 2010 AOC requirements.

Anonymous

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Commenter No. 521: Teresa Klassen

We've been promised assistance in the way of clean up for many years. It's time you came through on getting this taken care of and helping our families stay healthy. We have lost so many loved ones from cancer.

Teresa Klassen

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DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 522: Margaret Abate

I have lived in the shadow of the SSFL for 26 years. I raised my 3 children here. As the years went by friends and neighbors of all ages developed cancers. I began to learn about this facility and the its radioactive history from a mother who lost her teenage daughter to cancer. Those of us living in the shadow of this poison pit have had commitment and promises broken so many times it is really criminal. The DOE and US Government is responsible for protecting its citizens from sites like this. Keep your commitments. Anything less is unacceptable.

Margaret Abate

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522-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

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522-2 DOE acknowledges your concern about protecting citizens from sites like SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Committer No. 523: Arline Mathews

The government called it “defense” and secretly installed ten reactors at the missile factory. IT IS NOT DEFENSE, WHEN YOU KILL OFF YOUR OWN PEOPLE. A Univ. Of Ill. study found that many more cancers would happen to millions of people here in the L.A. and Ventura area, as a result of the radioactivity and hazardous waste left behind. There never was cancer in my family but my son died of Glioblastoma - a rare cancer of the brain, and his son got leukemia. I believe that the Government. is responsible. We have a right to have it cleaned up to background. Any court would find that the victim should be made whole again, whether something was ab accident or otherwise.

Arline Mathews

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Chapter 1, Section 1.3, of this Final EIS contains a brief history of activities at SSFL. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV can be found at <http://www.etec.energy.gov/>. As indicated in this section, SSFL was developed as a remote site to test rocket engines and to conduct nuclear energy research. These activities occurred in physically separate areas at SSFL, the nuclear energy research activities being conducted in Area IV of SSFL, which physically comprises about 10 percent of the land area at SSFL. Activities at Area IV did not include the manufacture of missiles but did include nuclear energy research and development; manufacture, disassembly, and management of nuclear reactor fuel; testing liquid metal processes and developing liquid metal components; and other energy-related work. Additional information about Area IV operations is at http://www.etec.energy.gov/Operations/Operations_Work.html.

Please refer to Sections 2.7, “Offsite Impacts”, and 2.8, “Cancer and Other Illnesses Near SSFL”, of the CRD for discussions of these topics and DOE’s responses. See also Chapter 3, Section 3.9.5, of this EIS, which presents comparative data on cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

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DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of studies of illnesses in the vicinity of SSFL and author-acknowledged limitations of those studies. DOE is not aware of a University of Illinois study related to SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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DOE acknowledges your concern about cleanup to background levels. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 524: Terri Kuroda

It is way past the time to get Rocketdyne cleaned up of all the nuclear and chemical contamination. Including all the barrels and barrels that were buried in the hills on the property. This is the obligation of the people that did this many, many years ago to clean it up. If not I feel it's time for the City/State to sue the parties that are not taking this seriously and cleaning it up.

Terri Kuroda
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DOE acknowledges your concern about cleanup of all nuclear and chemical contamination at the site. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please note that the statement about barrels of wastes remaining within Area IV of SSFL is inaccurate. All such wastes were removed as part of cleanup actions in the 1980s and 1990s. In fact, as discussed in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

Commenter No. 525: Lynn Johnson

My husband and I lived in the Texas Tract in Simi Valley for 16 years. We have since moved to the west end. I was diagnosed with thyroid cancer in 2009 and breast cancer in 2011. My husband was diagnosed with thyroid cancer as well last year. We believe strongly that our cancers are directly related to the spill that should have been cleaned up so so long ago. It is reprehensible that this has not been done and that they refuse to take care of our community!!!!!! They should be ashamed of all the lives that have been lost and families who have suffered devastation in their families..... they will have to answer to the Lord our God!

Lynn Johnson

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DOE refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information on contamination in the area around SSFL and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

If the comment is referring to the SRE accident, it was cleaned up a long time ago. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Committer No. 526: Patrick Russo

The mess Rocketdyne, the AEC, DOE, and NASA have left atop the SSFL is disgusting. These agencies are directly responsible for the death of hundreds of innocent people who unknowingly developed illnesses as a result of exposure to the Radioactive contamination left behind from the projects these agencies undertook. The ability these agencies have to say “technically these illnesses cannot be proven to have resulted from the radioactive disaster we created” is appalling. The contamination atop the hill is responsible for thousands of cases of cancer and other rare illnesses. Just living with in 40 miles of the disaster site puts all citizens at risk for there lives. I would like to personally thank these agencies for creating a superfund sight. Horrible.

Patrick Russo

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DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 527: Christopher Rubin

Clean it up! For the sake of our children, grandchildren, and all future generations.

Christopher Rubin

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DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 528: Jon P Scott

The Santa Susana Lab area needs to be cleaned up. I lived in Bell Canyon, a community a few mile away from the site. I used to walk my dog and we would cross the “seasonal” creek and my dog died of cancer of the paws. I moved into Bell Canyon in 1980 and in 1985 I developed a malignant melanoma on my neck. It was removed just before it entered my blood stream. In 1990 I was an intervenor in the case against Rocketdyne because they wanted to extract plutonium from metal fuel rods on the site and then transport them to another state. I won that battle and I urge you to not let this site be left in the shape it is in. Here is a link to my intervenor status. <https://www.nrc.gov/docs/ML0725/ML072540509.pdf> I moved out of Bell Canyon because it is a dangerous place to live. This facility needs to be FULLY cleaned up before more innocent people lose their lives. This facility is dangerous and it’s a known fact and has been documented that many former workers have developed cancer and have died because of exposure of deadly chemicals, still on that property. I URGE YOU YOU HAVE THIS AREA CLEANED UP COMPLETELY!!!

Jon P Scott

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528-1 DOE acknowledges your preference for full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

528-2 DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL.

DOE’s purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated are protective of public health and safety and the environment.

Commenter No. 529: Dr. Jennifer Stirewalt

I urge you to continue the cleanup process on Santa Susana field laboratory. I personally suffer from autoimmune arthritis and recently my husband was diagnosed with fibromyalgia both diseases I feel may be the result of environmental toxin exposure. . I also have many friends and clients that suffer from disorders that are thought to be rare diseases but are quite the norm in Simi Valley. As a veterinarian I also see this trend in my Animal patients as well. I remain extremely concerned about this issue and will continue to raise awareness until something is done to remedy the situation. Covering it up and walking away is not the answer. Everyone’s health is at stake. Something must be done! Sincerely,

Dr. Jennifer Stirewalt
Simi Valley Animal Hospital

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529-1 DOE acknowledges your concern about cleanup of SSFL. DOE’s purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

529-2 DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL.

DOE’s purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated are protective of public health and safety and the environment.

Commenter No. 530: Sarah Dowthwaite

To whom it may concern,

The Santa Susana Field Laboratory has been a wasteland for nearly half a century. High levels of radiation and nuclear waste in the soil have long been preventing development along the beautiful hills of Simi Valley. Now, more than ever, a proper clean-up plan must be made, as there is new housing under construction less than a mile from the site, the closest large-scale development yet. Those who live closest to the site have seen the consequences: namely, rare cancers and illnesses linked to radiation and toxic substances. The dangers that lurk beneath the ground are especially dangerous as they're at a high point and trickle down to the valleys with wind, rain, and streams. There is no question to the severity of the problem. This is an issue long ignored in the history of Simi Valley and thus few efforts have been made to resolve it. An adequate site clean-up that leaves little to no contaminated soil left needs to be executed fully and swiftly. The solution is clear but has taken almost fifty years to be properly implemented. We cannot afford to wait any longer. I ask that as you finalize the plans for the Santa Susana Field Lab cleanup, you consider the health and safety of those near the site, especially as construction continues to encroach into the hills and more people will be populating the surrounding area.

Sarah Dowthwaite

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530-1 As indicated in Chapter 1 of this Final EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater, and intends to complete remediation of SSFL Area IV and the NBZ in compliance with applicable requirements (including regulations, orders, and agreements) for cleanup of radioactive and hazardous substances.

Chapter 1, Section 1.3, of this Final EIS, contains a history of the SSFL site that summarizes DOE's past activities in Area IV, including previous cleanup efforts. Additional information can be obtained from the DOE Energy Technology Engineering Center website (see <http://www.etec.energy.gov/>). DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. This Final EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. This EIS will inform Federal decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste. DOE will complete contamination removal and site remediation at Area IV and the NBZ based on the decisions made pursuant to this Final EIS and in accordance with all regulatory requirements. As discussed in Chapter 1, Section 1.5, of the this Final EIS, in 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

530-2 DOE acknowledges your preference for cleanup of the site. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL

Commenter No. 530 (cont'd): Sarah Dowthwaite

for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

As discussed in Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Each of the alternatives evaluated, including No Action Alternatives required by NEPA, consider the potential risks to human health as well as protection of natural resources to determine cleanup levels. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

530-3 DOE acknowledges your concerns and refers you to Section 2.7, “Offsite Impacts,” of this CRD regarding your concern about dispersion of contamination into the valleys and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

Commenter No. 531: Monzelle Brock

The suggestions the DOE has proposed will still leave toxic wastes behind. It will continue to migrate and contaminate nearby communities. There is a strong possibility that myself and 2 immediate neighbors have developed hypothyroidis as we have lived at the west end of Simi Valley for over 45 years, and we all were diagnosed in close proximity to each other in time. Simi Valley is a 9 mile slope ending at the west end, and water leaches out from our rocky terrain when it rains. and collects here at the west end. (The city has installed pumps to control our over-flooded curbsways.) This, plus reading in the Star this past week about a cluster of elementary school children with brain cancer which is apparently attributed to Rocketdyne's tests in the article make me feel very strongly that the site should be completely cleaned up to help avoid future consequences, especially with our young. (and why would anybody want to save a monument of the launch test site as a reminder? It's contaminated too!)

Monzelle Brock
Retired L.V.N.

531-1

531-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

531-2

531-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

531-1
cont'd

531-3

531-3 DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of studies of illnesses in the vicinity of SSFL and information on cancer clusters. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

531-4

531-4 DOE acknowledges your preference for cleanup of the site. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Note that sites for testing rocket engines at SSFL are located in areas separate from Area IV and the NBZ. Activities in these areas were not under the purview or control of DOE or its predecessor agency, the Atomic Energy Commission.

Commenter No. 532: Susan Waitkuweit

It is absolutely unacceptable that the SSFL hasn't been cleaned up long before this. There are so many people here with rare forms of cancers and rare illnesses. This area should be 100% cleaned up of any and all contaminants. People before profit!!!

Susan Waitkuweit

|| 532-1

532-1 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

|| 532-2

DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

532-2

DOE acknowledges your preference for 100 percent cleanup of any and all contaminants. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 533: Matti Werber

100% of the spill must be removed. The impacts of this spill have been ongoing for years and the devastation must end now.

Matti Werber

|| 533-1

533-1

DOE acknowledges your preference for 100 percent cleanup. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 534: Jeremy Beck

Clean up this mess!!!!

Jeremy Beck

|| 534-1

534-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 535: Anonymous

Please continue to clean up the SSFL Area IV EIS 100% ! I have lived near this area all my life and know far too many family's that have had repercussions from this contamination area . Question.. why would you not clean it up completely ? I am sure if you lived near it you would ! Please think of all the family's that live around here and don't take the easy way out .. Do What Is Right for the People !

Anonymous

|| 535-1

|| 535-2

|| 535-1
cont'd

535-1 DOE acknowledges your preference for complete cleanup of any and all contaminants. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

535-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Commenter No. 536: Geoff Stradling

Sir/Madam - I am writing to ask you to complete your obligation to clean up all of the nuclear and chemical contamination at the Santa Susana Field Laboratory. Removal of the contamination is crucial to life of humans, plants, and other animals in the area around the SSFL. I ask you - would you want to live in a sea of nuclear waste? Would you want your grandchildren to? What will we tell future generations if we leave our mess behind?

Geoff Stradling

536-1

536-1

DOE acknowledges your preference for cleanup of contamination at SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance of the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

DOE does not understand the comment about letting people live in a sea of nuclear waste. Any radioactive waste that was generated as part of operations or due to previous cleanup activities has been removed. As discussed in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

Commenter No. 537: Elizabeth Wilson

This must be cleaned up NOW. Please make this happen.

Elizabeth Wilson

|| 537-1

537-1

DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, of this Final EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 538: Josette & Yvette Howard

I want to make sure that you are going to clean up every part of the contamination that needs to be cleaned up so that our families can be safe. You promised to clean up everything until it was completed. So please do so until everything is clean.

Josette & Yvette Howard

538-1

538-1

DOE acknowledges your preference for complete cleanup of contamination at the site. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 539: Rochelle Trop

Please Have a conscience and do the right thing. Clean up the toxic waste. || 539-1
Rochelle Trop

539-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 540: Lynda Martin

Please uphold your commitment to cleanup ALL the contamination at SSFL.

Lynda Martin

|| 540-1

540-1

DOE acknowledges your preference for cleanup of all the contamination at SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 541: David Martin

As government agencies it is your Responsibility to protect people If you and your children are part of the human race I would hope you will use every means available to Clean this mess up.

Sincerely

David Martin

541-1

541-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 542: Teresa Uribe McGilvray

Please stand on your commitment to clean up the SSFL! We have friends and family who have already paid the price of this contaminated area. I beg that you do not look the other way as new buildings, parks and recreation centers are built on this un-cleaned, toxic area. Our lives and that of our children depend on you keeping your promise to clean this area... or leave it barren!! If you think it is safe than I would encourage you to buy and live in this area with your families. All lives matter. Money can wait! Please keep your promise and don't be swayed by big business. You are selling out the health and lives of thousands of people while knowing what lies below and around them...poison!

Thank you,

Teresa Uribe McGilvray

542-1

542-2

542-1

DOE acknowledges your concern about cleanup of SSFL. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

DOE acknowledges your concerns and notes that the future use of Area IV and the NBZ, those parts of SSFL that DOE is responsible for remediation and are addressed in this EIS, is as open space. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS includes revised text that acknowledges the land use covenant and evaluates cleanup levels that reflect the planned use as open space. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Regarding concerns about contamination and health impacts, refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 543: Wendy Blommendahl

Honor your 2013 commitment. 100% cleanup is necessary. No exceptions. I was born and raised in Simi and have an unbelievable number of health problems and have to take about 20 medications every day. I am only 40 years old, but I am already disabled. My diagnoses: Systemic Lupus Erythematosus w/ nephritis, autoimmune hepatitis, fibromyalgia, Sjogren's, Interstitial Cystitis, migraines, asthma, osteopenia, hypothyroidism, depression, CPTSD, Avascular Necrosis right hip (replaced), left hip osteoarthritis & labral tear (repaired), pancreatic cysts (removed), pituitary Rathke's cleft cyst, spinal stenosis, bulging discs DON'T LET PEOPLE CONTINUE TO LIVE IN NUCLEAR WASTE. How can that be right?

Wendy Blommendahl

|| 543-1

|| 543-2

|| 543-1
cont'd

543-1 DOE acknowledges your concern about 100 percent cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Any radioactive waste that was generated as part of operations or due to previous cleanup activities has been removed. As discussed in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

543-2 Thank you for your comment. It has been included in the Administrative Record for this EIS.

Commenter No. 544: Maria Aguirre

Your job is to keep us safe. Please do that.

Maria Aguirre

|| 544-1

544-1 DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities.

Commenter No. 545: Anonymous

In 2010, the Department of Energy, NASA and the CA Department of Toxic Substances Control (DTSC) agreed to the Administrative Order on Consent (AOC) for a clean-up of the Santa Susana Field Laboratory (SSFL) to background levels by 2017. I request the Department of Energy keeps the AOC contract and removes 100% of the contamination be removed to a toxic waste facility, by any means necessary. The Dept of Energy is responsible for ensuring the removing the toxic contaminants in the Santa Susana Field Laboratory area. The delays must stop and the clean-up must begin. Your agency is already behind schedule and the newest scare tactics for delay are unsubstantiated. I request the Department of Energy stops spreading inaccurate information regarding the “dangers” of clean-up and removal process. According to the Draft Environmental Impact Statement (DEIS), the only danger to the public is potential truck accidents or smog from trucks. None of these are particularly dangerous, and neither come close the actual danger to the lives of children who live in the contaminated SSFL area. By following federal, state, and local laws the Dept of Energy can take all necessary precautions to ensure a safe and complete clean-up. I request the Dept of Energy utilize the service roads, nearby rail stations and build covered conveyor belts to remove the contaminants, bypassing the need to use heavily populated roads and/or traveling to a farther rail station 60 miles away. No more excuses. Start the clean-up now.

Anonymous

545-1

545-1 DOE acknowledges your preference for 100 percent removal of SSFL contamination. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

545-2

In addition, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE can begin the comprehensive cleanup of soils and groundwater in Area IV and the NBZ following the completion of both the CEQA and NEPA processes and following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

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DOE’s intent is not to alarm people, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs

Commenter No. 545 (cont'd): Anonymous

between the alternatives. In the case of soil remediation and using the Conservation of Natural Resources Alternative as an Example, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site and associated transportation risk and air quality impacts. But, the potential impacts to a site user following cleanup would be highest for this alternative. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, as would be the case for Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site and increases the transportation risk and air quality impacts. But, the potential impacts to a site user following cleanup would be lowest for this alternative. Although the cleanup level under the soil remediation action alternatives and scenarios are different, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment regardless of the alternative (see Chapter 4, Section 4.9).

DOE agrees with the commenter's statement regarding the cleanup being conducted safely. Regardless of the cleanup alternative selected and implemented, DOE would comply with the laws, regulations, and processes that have been established to protect the public and workers.

545-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 546: Sarah Casey

In 2010, the Department of Energy, NASA and the CA Department of Toxic Substances Control (DTSC) agreed to the Administrative Order on Consent (AOC) for a clean-up of the Santa Susana Field Laboratory (SSFL) to background levels by 2017. I request the Department of Energy keeps the AOC contract and removes 100% of the contamination be removed to a toxic waste facility, by any means necessary. The Dept of Energy is responsible for ensuring the removing the toxic contaminants in the Santa Susana Field Laboratory area. The delays must stop and the clean-up must begin. Your agency is already behind schedule and the newest scare tactics for delay are unsubstantiated. I request the Department of Energy stops spreading inaccurate information regarding the “dangers” of clean-up and removal process. According to the Draft Environmental Impact Statement (DEIS), the only danger to the public is potential truck accidents or smog from trucks. None of these are particularly dangerous, and neither come close the actual danger to the lives of children who live in the contaminated SSFL area. By following federal, state, and local laws the Dept of Energy can take all necessary precautions to ensure a safe and complete clean-up. I request the Dept of Energy utilize the service roads, nearby rail stations and build covered conveyor belts to remove the contaminants, bypassing the need to use heavily populated roads and/or traveling to a farther rail station 60 miles away. No more excuses. Start the clean-up now.

Sarah Casey

546-1

546-1

DOE acknowledges your preference for 100 percent removal of SSFL contamination. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

546-2

In addition, please refer to Chapter 1, Section 1.3 of this Final EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b])). DOE can begin the comprehensive cleanup of soils and groundwater in Area IV and the NBZ following the completion of both the CEQA and NEPA processes and following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

546-3

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cont’d

546-2

DOE’s intent is not to alarm people, but it is a true that the more soil that is removed to clean up the site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs

Commenter No. 546 (cont'd): Sarah Casey

between the alternatives. In the case soil remediation and using the Conservation of Natural Resources Alternative as an example, leaving more soil and consequently low concentrations of chemicals and/or radionuclides on site reduces the number of truck trips from the site and associated transportation risk and air quality impacts. But the potential impacts to a site user following cleanup would be highest for this alternative. Conversely, removing the soil with low concentrations of chemicals or radionuclides, as would be the case under the Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site thus will increase the transportation risk and air quality impacts. But the potential impacts to a site user following cleanup would be lowest under this alternative. Although the cleanup levels under the three soil remediation action alternatives and scenarios, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment regardless of the alternative. (Please see Chapter 4, Section 4.9 of this EIS.)

DOE agrees with the commenter's statement regarding the cleanup being conducted safely. Regardless of the cleanup alternative selected and implemented, DOE would comply with the laws, regulations, and processes that have been established to protect the public and workers.

546-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 547: Marie Garside

Please uphold your commitment for the fullest clean up of the SSFL Area IV EIS. Only a full clean up is acceptable to the residents of Simi Valley and it will work toward protecting our health in the future.

Marie Garside

547-1

547-1

DOE acknowledges your preference for full cleanup of SSFL Area IV. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 548: Tessa Mykel

Ms. Stephe Jennings
 NEPA Document Manager
 SSFL Area IV EIS
 US Department of Energy
 4100 Guardian Street, Suite 160
 Simi Valley, CA 93063

Dear Ms. Jennings,

I am deeply concerned about the impact the contaminants at the Santa Susana Field Laboratory will have on the environment and on the surrounding communities, unless DOE is held responsible for cleaning up its toxic mess. DOE signed the AOC in 2010, agreeing to a full clean-up of the Santa Susana Field Lab. In its Draft EIS, DOE proposes four alternatives that either leave 39%, 91%, 99%, or 100% of the contamination at SSFL not cleaned up. All of these alternatives violate the 2010 AOC, a legally binding agreement, leaving dangerous radionuclides and toxic chemicals on the site to continue to harm neighboring communities. DOE's Draft EIS fails to acknowledge that the AOC is a legally binding agreement, which DOE has chosen to ignore. As the polluter, DOE does not have the authority to decide how much of the mess that it made is going to get cleaned up. The decision rests with DTSC for the chemicals under the Resource Conservation and Recovery Act, even if there were no AOC. The AOC also gives authority to DTSC in terms of remediation goals for radionuclide contamination. DOE claims that a protective cleanup poses undue harm to the environment and that the contamination poses little risk. On the contrary and in all truth, the contamination poses a very significant risk to public health in all DOE's options, a risk that far outweighs environmental concerns of cleanup, which can be mitigated. Most of the cleanup is occurring in areas that are already disturbed by DOE activities. DOE was not concerned about the environment when it was polluting the land, nor about trucks when they were driving up to SSFL every day bringing hazardous loads of spent commercial nuclear fuel from around the country. I urge the DOE to scrap this EIS and comply with the 2010 AOC. If DOE moves forward with any of the alternatives that it outlined in the Draft EIS, human health and the environment will suffer.

Sincerely,

Tessa Mykel

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| 548-1 | 548-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. |
| 548-2 | 548-2 DOE acknowledges your preference for a complete cleanup of SSFL in accordance with the 2010 AOC. Please refer to Section 2.1, "Preferences for Cleanup," of this CRD for additional information. |
| 548-3 | 548-3 The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. This EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. |
| 548-4 | 548-4 DOE recognizes that the AOC is a legally binding agreement and also recognizes DTSC's authority over the cleanup at SSFL. DOE recognizes that DTSC needs to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC and DOE-prepared RCRA closure plans for building demolition. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for |
| 548-2 cont'd | |

Commenter No. 548 (cont'd): Tessa Mykel

agency action. This Final EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, this EIS also analyzes alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

548-4 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Potential risks to public health and safety under all proposed alternatives are presented in Chapter 4, Section 4.9, and Appendices G and K, of this EIS. Each of the action alternatives evaluated in this EIS is protective of the environment and the health and safety of the public and workers.

Commenter No. 549: Lauren Hammersley

My 6 year old daughter Hazel is a Simi Valley resident and is fighting cancer for the second time! When we moved to Simi, we were made aware of the meltdown, but were assured that it was safe to live here. But after her diagnosis, we began meeting way too many families in our surrounding communities that had children suffering from similar diseases, and like Hazel's, some wer very rare forms of cancer. We began researching and have been appalled by the things we have learned, and especially by the DOE and their willingness to not live up to their responsibilities with a full clean up. So I am here to DEMAND for that full clean up, on behalf of my daughter, all of the children like her in our communities and all future generations!

Lauren Hammersley

549-1

549-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

549-2

549-2 DOE acknowledges your preference for full cleanup of SSFL Area IV. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public

Commenter No. 550: Sarah Miller

It is completely unacceptable that my children's children will have to live in the SSFL mess. This should have been cleaned up years ago. I propose that any and all involved in trying to extend or cancel FULL cleanup in the Santa Susana hills, be required to live in the Knolls for a minimum of 20 years if this passes. FULLY CLEAN UP THE MESS. You are exposing our families to chemicals that should have been fully cleaned up directly after the incident occurred. You have now wasted time expecting the public to forget it and it has had years of high winds and rain to spread these chemicals throughout Simi Valley and its surrounding communities. Full and immediate cleanup is required.

Sarah Miller

550-1

550-1

DOE acknowledges your concern about full cleanup of SSFL. Please refer to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

550-2

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Regarding your comment about a mess that should have been cleaned up years ago, DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

Regarding your comment about immediate cleanup, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE can begin the comprehensive cleanup of soils and groundwater in Area IV and the NBZ following the completion of both the CEQA and NEPA processes and following completion of the following regulatory actions: (1) DTSC issues a Notice

Commenter No. 550 (cont'd): Sarah Miller

of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

550-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Commenter No. 551: Ronald B. Ziman, MD, FACP, FAAN

It is my intent that these personal comments be added to my prior comments and not replace them. Thank you for providing a Draft EIS that includes various alternatives, as required by law. I applaud the DOE for having the courage to act lawfully and resist the pressures placed upon it by radical and irrational elements. The EIS development is intended to be scientifically based without undue political influence. To exclude alternatives as prescribed by the AOC before proper site characterization and designating a cleanup process that does not take into account risk, the proven methodology of the widely accepted and long standing EPA cleanup standards, final planned land use or the law would have been unlawful, unjustified and unconscionable. It would not be making a rational cleanup plan based on facts, but rather ignoring the facts in favor of a predetermined and unnecessarily aggressive, destructive and costly cleanup plan. The AOC itself is internally conflicted, inconsistent and illegal. It states, in part, that it will not contradict law, yet it requires that no cleanup alternatives be considered other than that which it defines. This violates both federal and state law. What we know today is that the site contains physical remains of a rich and unique Native American cultural heritage in addition to its national historical value. We also know that though there are some areas that require cleanup, the level of the soil contamination largely does not pose significant risk for open space use. David Krupp, Ph.D., Director of the Griffith Observatory, is a widely respected archeoastronomer. He is also very familiar with the SSFL site. He is on record indicating that this site is unique throughout the world. In his opinion it is of World Heritage quality and would qualify for such designation. The cleanup, as predefined in the AOC, would destroy this historical and cultural site beyond repair. Its educational and historical value would be forever lost to the United States and the world as a result of the cleanup as predetermined by the AOC. Despite claims to the contrary, there is no evidence of SSFL having caused disease to those living in the neighboring communities. I live in Bell Canyon. As a physician, of which I am one of many living here, neither I nor the other doctors would place ourselves or our families at increased health risk if we felt otherwise. As a physician neuroscientist on faculty at UCLA I am in the unique position to be able to critically review and understand the health and epidemiological data that has been developed, collated, reviewed and published by

551-1

551-1 DOE acknowledges the commenters concern for the Cleanup to AOC LUT Values Alternative. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

551-2

551-2 DOE recognizes the breadth of resource values in Area IV and the NBZ and intends to protect human health without unduly damaging the environment. This is reflected in the range of alternatives DOE developed and analyzed, which allows a comparison of impacts among the various resource areas, including cultural resources. Also, please see Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for a discussion of how DOE’s alternatives and Preferred Alternative relate to the technical elements of the 2010 AOC; Section 2.1, “Preferences for Cleanup” of this CRD for DOE’s process for determining the final selection of an alternative; and Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD for a discussion of the process that will be used to determine exemptions DOE’s preferred alternative for soils remediation is the Conservation of Natural Resources, Open Space Scenario. DOE is identifying this as the preferred alternative because it is consistent with the risk assessment approach typically used at other DOE sites, other DTSC-regulated sites, and EPA CERCLA sites that accounts for the specific future land use of the site. Use of a risk assessment approach is consistent with the process being employed by Boeing for the land it owns at SSFL and recognizes the Grant Deeds of Conservation Easement and Agreements (Ventura County 2017a, 2017b) that commit Boeing’s SSFL property, including Area IV and the NBZ, to remaining as open space habitat. This scenario uses a standard risk assessment approach that is protective of human health and the environment rather than LUT values (action levels). The 2010 AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives.

551-3

Commenter No. 551 (cont'd): Ronald B. Ziman, MD, FACP, FAAN

the Public Health Department , various academic institutions and private contractors. Having said that, there is an additional health concern that the DOE's DEIS appears to have overlooked. The AOC cleanup plan will require removing much of the soil in area IV down to bedrock. This will change the surface water drainage pattern which is defined by the topography, transforming the new drainage to conform with the topography of the underlying bedrock in many places. The current AOC does not allow for modification related to drainage.. The amount of soil removed per the AOC will depend on ongoing testing for detectable contaminants at depth and therefore is subject to change. To date no soil has been identified to replace that which will be removed to be able to establish good drainage. The reasonable development of a drainage plan for what will be a gigantic grading project without predetermined soil excavation or the ability to replace soil is simply not possible. California, including Southern California, has just experienced one of the wettest winters on record. The health departments have already expressed concern to the public that this year's wet winter will translate into an unusually heavy mosquito infestation, carrying with it an increased risk of mosquito borne diseases such as West Nile virus and Avian Flu. Los Angeles County has already recorded cases of West Nile Virus infection in people this year. Last year there were 153 cases and 6 deaths documented in Los Angeles County by the LA County Public Health Department. Another 7 cases were documented in Ventura County by its Health Department. Because of limited testing, these numbers are undoubtedly low relative to the actual number cases that were never tested. There is also the potential for the introduction of the Zika virus into California, which would then be added to the list. Improper and unknown drainage patterns will result from grading without having any grading plan or control of the final drainage due to the absence of replacement soil and the bedrock defining the post cleanup topography in many areas. There is the likely development of undesirable drainage patterns resulting in stagnant pools on the property. This would lead to new, fertile and potentially disease laden mosquito breeding grounds, posing an increased risk to anyone visiting the property. What risks there would be to the surrounding communities is unknown, but it is also potentially increased. I am unaware that this has been considered. To my knowledge there have been no studies addressing these concerns.

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551-4

551-3 Thank you for your comment. It has been included in the Administrative Record for the EIS. DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of the studies referred to in the comment. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

551-4 The alternatives under consideration in this EIS and the mitigation measures developed to minimize potential impacts to water quality and downstream flood control capacity were not configured to eliminate runoff from the project area. The alternatives and mitigation measures have instead been configured to control the rate of runoff from the site to more closely match existing runoff rates and limit the potential for increases in erosion from the site or downstream. As a result, the controlled drainage of the site during and following precipitation events would not result in new areas of standing water at the conclusion of the typical rainfall period of December through May that could contribute to new mosquito development habitat.

Commenter No. 551 (cont'd): Ronald B. Ziman, MD, FACP, FAAN

For additional reasons as submitted in my prior comments to DOE, as well as the above, I am therefore in favor of the cleanup with the least removal or disturbance of soil. This would result in the least impact on the topography, its drainage patterns and propensity for the development of new mosquito breeding areas. It is ironic that the excessive, impractical and costly cleanup defined by the AOC, purportedly to protect the public, really creates new and increased dangers which would otherwise be avoidable. Again, thank you for considering my comments.

Sincerely,

Ronald B. Ziman, MD, FACP, FAAN Board Certified in Internal Medicine, Neurology and Vascular Neurology Associate Clinical Professor of Neurology, David Geffen School of Medicine, UCLA Stakeholder and Resident of Bell Canyon Co Chair, SSFL Community Advisory Group

551-5

551-5 DOE acknowledges your support for a cleanup that would involve the least removal or disturbance of soil. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Commenter No. 552: Anonymous

I am requesting you hold to your word to clean up al the detectable contamination at SSFL/

Anonymous

|| 552-1

552-1 DOE acknowledges your preference for cleanup of detectable contamination at SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 553: Sheilah Abernathy

I live in Moorpark and have several friends that have children who have battled cancer or are now fighting for their life at this time. I am a blood donor at Children’s Hospital Los Angeles to help these children as well as providing meals, grocery shopping, etc. Please get the Santa Susana Field Laboratory cleaned up completely as soon as possible. Pets as well as humans are losing their lives to new strains of cancer as well as more common cancers. The toxins in the Simi Valley area should have been cleaned up a long time ago.

Sheilah Abernathy

553-1

553-1 DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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553-2 DOE acknowledges your concern about cleanup of toxins in the Simi Valley area. Please refer to Section 2.1, “Preferences for Cleanup,” of this CRD for additional information.

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Regarding your comment about toxins that should have been cleaned up years ago, please note DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

Regarding your comment about immediate cleanup, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE can begin the comprehensive cleanup of soils and groundwater in Area IV and the NBZ following the completion of both the CEQA and NEPA processes and following completion of the following regulatory actions: (1) DTSC issues a Notice

Commenter No. 553 (cont'd): Sheilah Abernathy

of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

Commenter No. 554: Karen Berman

Clean up Santa Susanna facility as promised. No more cancer. You have been poisoning our community for decades2

Karen Berman
Swan

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|| 554-2

554-1 DOE acknowledges your preference for full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

554-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information on offsite contamination and discussion of impacts following cleanup.

Commenter No. 555: Kimberly Gilbert

I grew up in Simi and had a number of friends pass away to cancer. This is the cause. This needs to be cleaned up. We are fellow humans and we deserve the right to a healthy life just as the people who did this to our community. Why do they think this is ok to leave a community to suffer the risk of their health based on their mistakes? I work in Quality Assurance and understand the effect this will have on the community as I understand all the steps to keep people healthy. This must be cleaned up 100%. Not 1 not 5, but 100%.

Kimberly Gilbert

555-1

555-1

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about site cleanup and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

555-2

DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 556: Robert Guenther

I am a resident of Simi Valley, a neighboring community. I am in shock that nearly 60 years after one of the worst contaminating events in history this is still debated whether or not to clean up this mess. It's simple: CLEAN IT UP! If this was in the backyards of the decision makers and company/agency executives this would not be debated, it would be done already! Make it so, we can't wait another 70+ years for this to "magically" go away on it's own.

Robert Guenther

556-1

556-1

DOE acknowledges your concern about cleanup of SSFL. DOE is not debating whether to clean up those portions of SSFL for which it is responsible, Area IV and the NBZ. Rather, this evaluates alternatives for accomplishing the cleanup. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

Commenter No. 557: Art St. Clair

It is clear the golden age of American responsibility is over - so glad my father isn't alive to see the defense industry he worked for so proud to pursue a few bucks over the welfare of the citizen's of the Country that gave it life.

Art St. Clair

557-1

557-1

DOE takes its cleanup and financial management responsibility quite seriously. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. DOE performed a cost-benefit analysis of the soil remediation alternatives as part of this EIS (see Appendix K). The results of the analysis show that the cleanup under the Cleanup to 2010 AOC LUT Values Alternative would be much more expensive and with minimal additional protection of public health and the environment compared to the other project soil remediation alternatives.

Commenter No. 558: Darlynn Childress

In 2010, the Department of Energy, NASA and the CA Department of Toxic Substances Control (DTSC) agreed to the Administrative Order on Consent (AOC) for a clean-up of the Santa Susana Field Laboratory (SSFL) to background levels by 2017. I request the Department of Energy keeps the AOC contract and removes 100% of the contamination be removed to a toxic waste facility, by any means necessary. The Dept of Energy is responsible for ensuring the removing the toxic contaminants in the Santa Susana Field Laboratory area. The delays must stop and the clean-up must begin. Your agency is already behind schedule and the newest scare tactics for delay are unsubstantiated. I request the Department of Energy stops spreading inaccurate information regarding the “dangers” of clean-up and removal process. According to the Draft Environmental Impact Statement (DEIS), the only danger to the public is potential truck accidents or smog from trucks. None of these are particularly dangerous, and neither come close the actual danger to the lives of children who live in the contaminated SSFL area. By following federal, state, and local laws the Dept of Energy can take all necessary precautions to ensure a safe and complete clean-up. I request the Dept of Energy utilize the service roads, nearby rail stations and build covered conveyor belts to remove the contaminants, bypassing the need to use heavily populated roads and/or traveling to a farther rail station 60 miles away. No more excuses. Start the clean-up now.

Darlynn Childress
Suburban Women’s Advocacy Network

558-1

558-1 DOE acknowledges your preference for 100 percent removal of SSFL contamination. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

558-2

Regarding your comment about beginning cleanup, please note, DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

558-3

In addition, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE can begin the comprehensive cleanup of soils and groundwater in Area IV and the NBZ following the completion of both the CEQA and NEPA processes and following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform

558-1
cont’d

Commenter No. 558 (cont'd): Darlynn Childress

the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

- 558-2 DOE's intent is not to alarm people, but it is a true that the more soil that is removed to remediate the site, larger the transportation effort (i.e., a larger number of truck trips) that would be required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs between the alternatives. In the case of soil remediation and using the Conservation of Natural Resources Alternative as an example, leaving more soil and consequently low concentrations of chemicals and/or radionuclides on site reduces the number of truck trips from the site and associated transportation risk and air quality impacts. But the potential impacts to a site user following cleanup would be highest for this alternative. Conversely, removing the soil with low concentrations of chemicals or radionuclides, as would be the case under the Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site thus will increase the transportation risk and air quality impacts. But the potential impacts to a site user following cleanup would be lowest under this alternative. Although the cleanup levels under the three soil remediation action alternatives and scenarios are different, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment regardless of the alternative (see Chapter 4, Section 4.9).

DOE agrees with the commenter's statement regarding the cleanup being conducted safely. Regardless of the cleanup alternative selected and implemented, DOE would comply with the laws, regulations, and processes that have been established to protect the public and workers.

- 558-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Commenter No. 559: Millie Reina

I had a daughter I raised in Simi Valley and she passed away from angiosarcoma cancer as she turned 28. Don't let this keep happening to our children. She was beautiful inside and out with a bright future.

Millie Reina

559-1

559-1

Thank you for your comment. Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 560: Thomas Boen

We need full clean-up of the SSFL in Simi Valley/Chatsworth! This has been left unattended for too many years. Please come clean this up and help our children live healthier lives in our community. Thank you!

Thomas Boen

560-1

560-1

DOE acknowledges your preference for full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Regarding your comment about cleanup being left unattended for too many years, please note, DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

Commenter No. 561: T. Bowden

Clean it up. Our kids deserve a clean environment. Fix the problem.
T. Bowden

|| 561-1

561-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 562: Kristina

We demand a full clean up of this site...how can you do this to all the children and families here

Kristina

|| 562-1

562-1

DOE acknowledges your preference for a full cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 563: Delmy Paz

Not afraid do it right and investigate!!! My daughter has been fighting childhood cancer for 5 yrs and yes she deserves to know the truth whatever it's.

Delmy Paz

563-1

563-1

DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 564: Martita

One of the first things we teach our children is to “own it and fix it”. They know if they make a mess, they are responsible for cleaning it up. Please do your part and do as promised ; clean up the SSFL and do it in an efficient and careful way. Don’t use shortcuts to give false promises and leave toxicity behind. Our children and our future generations don’t have price tags! Please don’t compartmentalize the problem to help you sleep better at night ; we as parents ask for a full clean up of the SSFL!

Martita

564-1

564-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 565: Sarah Cortell

To Whom it May Concern:

I'm a resident of the Chatsworth Lake Manor area, and a real estate broker for the past 18 years. I'm writing these comments as I'm unable to see the benefit of any clean-up at such a delayed date after the contamination, and I'm concerned for the residents of my neighborhood. Other than the mandate to clean the site, I'm not seeing a well founded reason or benefit to doing so, except for maybe for the contractor who lands the bid. I think the astronomical amount of money that would be spent for the clean up to AOC LUT values, could be better spent in just as an astronomical number of ways. This is a ludicrous proposal. I don't believe any action should be taken, but if forced to choose an option, I will go with the Conservation of Natural Resources Alternative. Whatever action is taken, I hope there is serious consideration for the health, quiet enjoyment of property, and property values for the residents in the immediate areas. Yes, "NIMBI" ism is alive and well. If a direct route to the 118 freeway is feasible, that's great, but bringing thousands of diesel trucks through residential neighborhoods is simply unacceptable. Even if they are split between Lake Manor and Roscoe, it will still pose a serious impact on our neighborhoods. Not to mention the potential risk of death to recreational bicyclists when we have thousands of trucks larger than these small streets were designed to handle. If we have to endure years of noise and air pollution, what's the budget, and who's responsible to clean up our soil of diesel particulate pollution, to compensate us for the loss of our quiet enjoyment of our property, and for our depreciation in property values?

Sincerely,

Sarah Cortell
Real Estate Agent Chatsworth Manor Resident

565-1

565-2

565-3

565-1 DOE acknowledges your comment that no action need be taken but that if forced to choose an option, you would prefer the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

565-2 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

565-3 As discussed in Chapter 2, for the Final EIS DOE revised the EIS analysis to reflect a more realistic average of 16 heavy-duty truck round trips per day for soil removal activities, although on some days the number of dally truck shipments could increase to 32. DOE evaluated transport of waste from SSFL down Woolsey Canyon Road, then via multiple local roadways to local freeways. Shipments would occur during daylight hours. The EIS evaluates the potential impacts that could occur during shipment of waste and materials, including those from potential accidents, and found these potential impacts to be very small (also see the response to comment 162-6).

Considering all remediation activities at Area IV and the NBZ (i.e., soil remediation, building removal, and groundwater remediation), daily shipments attributable to DOE remediation activities would not exceed 32 and generally would be considerably less. However, NASA and Boeing could also be making shipments of waste, backfill, and equipment during some of the same years that DOE would be making shipments of waste, backfill, and equipment. As discussed in Chapter 2, Section 2.4.4, of this Final EIS, DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of trucks allowed on Woolsey Canyon Road to no more than 96. The potential cumulative impacts of site remediation by DOE, NASA, and Boeing are evaluated in Chapter 5 of the EIS, including the risks associated with transport of waste and material and the potential impacts on traffic in the SSFL area. DOE expects that daily heavy-duty truck shipments potentially as high as 96 per day from DOE, NASA, and Boeing would only occur for a few years.

As indicated in the summary of impacts in this EIS (e.g., Chapter 2, Table 2-9), truck traffic associated with cleanup activities would have some level of impact (noise, emissions) under any of the alternatives. Based on the analyses included in this EIS, DOE does not anticipate there would be any impacts that warrant compensation.

Commenter No. 566: Jessica Boen

Like many others, my family has suffered from cancer. We live in Simi Valley, What does the concentration of cancer have to be? The entire city? Please, We need FULL SSFL CLEANUP IMMEDIATELY!

Jessica Boen

|| 566-1

|| 566-2

566-1 DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

566-2 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

In addition, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). The completion of both the CEQA and NEPA processes must occur before DOE can complete the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

Commenter No. 567: Tom Boen

Our families have suffered enough! Please, Please, Please conduct a full clean up of the SSFL. We need to save our families!

Tom Boen

|| 567-1

567-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 568: Tyler Boen

Please conduct a full clean up of the Santa Susana Field Lab and surrounding areas. Our families have suffered through cancers, autism, SPD. It is not fair to the community. We did not know about the field lab, and it's history before buying in the area. We are now stuck here. Please, save our families. I want to be here for mine.

Tyler Boen

|| 568-1
|| 568-2

- 568-1 DOE acknowledges your preference for a full cleanup of SFL and surrounding areas. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 568-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE's purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated are protective of public health and safety and the environment.

Commenter No. 569: Ashley Boen

We are requesting a full site clean up of the Santa Susana Field Laboratory. Please protect our families.

Ashley Boen

|| 569-1

569-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 570: Margery Brown

All of the cleanup choices offered in the DOE EIS violate the AOC agreement to clean up to background, which is a legally binding document signed by DOE and NASA in 2010, It certainly appears that the DOE definitely intends to break this agreement which would leave anywhere between 34% to 99% of the radioactive and toxic chemical contamination in the soil to migrate to other communities. The AOC.s do not permit risk based assessments, and in this case, the cancer risk is assumed by the surrounding communities. There has been much too much deliberate frightening of people about all of the truck traffic that would be going through surrounding communities if the AOC agreement is carried out, but the DOE has NOT been willing to consider other alternative truck routes that would not go trough crowded communities. Also, those soil laden trucks have been going back and forth from the SSFL for years. The AOC's must be followed.

Margery Brown
West Hills Neighborhood Council

570-1

570-1 DOE acknowledges your concern about cleanup of SSFL in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

570-2

570-2 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

570-1 cont'd

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. Results of the analyses allow a comparison of potential impacts and the tradeoffs between the alternatives. In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this Final provide details of the transportation risk analysis.

Commenter No. 571: Teresa Earnest

my ex husband has throat cancer, he was not a smoker or drinker, but he was a big water drinker. my neighbor died of a rare cancer in January. please clean up this mess.

Teresa Earnest

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|| 571-2

571-1 DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

571-2 DOE acknowledges your concern about cleanup of SSFL. DOE’s purpose in preparing this Final is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 572: Laura

Please do your part and cleanup up all detectable contamination at SSFL. If SSFL contamination is left behind, it can continue to migrate offsite and put nearby communities at risk of cancer and other illnesses.

Laura

|| 572-1
|| 572-2

- 572-1 DOE acknowledges your preference for a cleanup of all detectable contamination at SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 572-2 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD regarding the potential for offsite migration of contaminants and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. All of the action alternatives evaluated in this EIS would result in cleanup of those areas of SSFL for which DOE is responsible, Area IV and the NBZ, that would be protective of human health and the environment.

Commenter No. 573: Mary Ann Seltzer

How many more people have to die before Boing cleans up the site. No one should be allowed on that property...Not now, Not ever. My daughters are still battling cancer that was caused by Rocketdyne. Years of pain and suffering, because of negligence and stupidity. How can these people sleep at night. When is this going to end? Promises that were never kept... We were lied to, years ago, and are still being lied to!! We must keep up the fight to put an end to this insanity. Even though it's too late for the many lives who were lost, and the many who are still battling cancer and other diseases caused by SSFL, we must continue this fight in their memory..7345K

Mary Ann Seltzer
SSFL-WG

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|| 573-2

|| 573-1
cont'd

|| 573-2
cont'd

573-1 DOE acknowledges your concern about cleanup of SSFL. Because DOE rather than Boeing is responsible for remediation of Area IV and the NBZ at SSFL, DOE prepared this Final to address the completion of cleanup of these areas. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

573-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.3, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 574: Elaine Weisberg

It is unconscionable and unacceptable if Rocketdyne does not fully clean- || 574-1
up the mess it left. People are dying and they are responsible! || 574-2

Elaine Weisberg

- 574-1 DOE acknowledges your preference for a full cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 574-2 Please see Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 575: Lorraine Benavidez

I'm a brain cancer survivor, I believe that Santa Susana Field has played apart in my brain tumor. I had a Glioblastoma Multiform Stage 4, it was the size of a orange on my right frontal lobe. I am the only family member who has had cancer, the dr's had only given me less than a year to live, even after my surgery. This was in 2005, I was 35 years old at the time. I was able to donate my tumor for cancer research and they also let me be a part of a Clinical Trial. I am one of a handful of patients who are still alive and have not had a recurrence of GBM. I remember being a child and playing on my swing set. I would hear the rocket engines, of Rocketdine. I lived at my parents house on [REDACTED].

Lorraine Benavidez

575-1

575-1

DOE thanks you for your comment and acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 576: Dr. Mark Hein

Leaving 30% to 90% of the work undone is a violation of the agreement. “Leave in place” is not an option.

Dr. Mark Hein

576-1

576-1

DOE acknowledges your concern about cleanup of SSFL in accordance with the agreement. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 577: Anonymous

Please continue your vigilance in completely cleaning up this area. Thank you, in gratitude,

Anonymous

|| 577-1

577-1

DOE acknowledges your preference for a complete cleanup of the area. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 578: Samantha Tamburro

The DOE must hold to its promise to clean up the Santa Suzana Site. It is a danger to all who live in the surrounding communities. Please fix the problem.

Samantha Tamburro

578-1

578-1

DOE acknowledges your preference for cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 579: Jeanne Fjelstad

Radiation migrates. I lived at The Summit Mobilehome Park 1996-2002. My Mom lived at Riviera Mobile Estates on Eton Ave, as the crow flies from the lab. My Dad worked on the first shuttle and died in 1988. He said he wanted to retire early as many of his coworkers were dying. I have the same RARE blood cancer my Mom died of in 2007. We both ate food grown in ground on Eton and Woolsey Cyn. I have no cure. I ALSO had breast cancer in 2008. I have bought my grave at Eternal Valley already. How many more must die? My Mom and I two lived different places, I also lived at her home before and do now. So I am still contaminated and I went to The National Institute of Health in Bethesda Md. US GOV...for genetic testing. NOT genetic! Every time the wind blows and every time the water flows the radiation spreads. FULL CLEANUP!

Jeanne Fjelstad
self/cancer victim 2'x

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579-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

579-2 Thank you for your comment. It has been included in the Administrative Record for the EIS. DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

579-3 DOE acknowledges your preference for full cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 580: Jackie Rowlett

This needs to be cleaned up for the sake of our children and families!!!

|| 580-1

Jackie Rowlett
Heritage

580-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 581: Lisa Rudolph

A full cleanup of the SSFL needs to be completed. Anything less is unacceptable. I lived in the area for 20 years and have since moved away, but have many friends still in the area. They deserve to live without the worry of contamination.

Lisa Rudolph

581-1

581-1

DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 582: Sheryl Pushkaric

It's past time to do the right thing! Please address the issues caused by the Santa Susana Field Lab on the communities impacted by radiation meltdown and cancer clusters. I lived in Simi Valley, CA from 1967 - 1975 and Moorpark, CA from 1977-1995. My parents lived in Simi Valley, CA from 1967-2004. Thousands and thousands of residents were impacted by Santa Susana Rockyne Plant while it was in operation. I believe SSFL to this day poses a risk to Simi Valley, CA and surrounding communities.

Sheryl Pushkaric

|| 582-1

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582-1 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of information on contamination in the environment and on illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 583: Joanie Brown

PLEASE PLEASE PLEASE CLEAN UP THE WASTE. MY GRAND-DAUGHTER'S SWEET LITTLE 5 YEAR OLD FRIEND HAS CANCER. NO CHILD SHOULD HAVE TO SUFFER SO MUCH. DO THE RIGHT THING. CLEAN UP THE MESS. WHAT IF IT WAS YOUR CHILD? THANK YOU.

Joanie Brown

583-1

583-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and other Illnesses near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 584: Robert MD Dodge

The proposed cleanup options in your EIS are totally inadequate. I urge you to remain committed to your promise for complete cleanup to background per the AOC. I ask what additional information do you need to understand the public health risk of not doing so? The majority of public opinion offered by those not vested in NON CLEANUP feel likewise. What will you tell yourselves as the next cases of childhood and adult cancers occur knowing that cleanup might have prevented them? Please keep your promise. Denial and paying off victims of this disaster is immoral. <http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/>

Robert MD Dodge

584-1

584-1 DOE acknowledges your concern about complete cleanup to background per the AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

584-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

584-2

DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your concern about the potential for non-cleanup and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for discussion of studies of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 585: Dr. James D. Brown

Please protect our beautiful city and our children and clean up the mess. Thank you. We must be responsible for our environment and our humanity.

Respectfully,

Dr. James D. Brown

585-1

585-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing the EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and other Illnesses near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 586: Judy Cameron

Please clean up SSField Lab contamination. We need to be responsible and protect our families.

Judy Cameron

|| 586-1

586-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 587: Kiryl Karpiuk

Ms. Stephie Jennings, NEPA Document Manager, SSFL Area IV EIS
US Dept. of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

I believe that the current excuses put forth by the Department of Energy to not clean up the Santa Susana Field Lab to levels specified in the 2010 AOC are inexcusable. Any of the three proposed alternatives, whether they call for leaving 39%, 91% or even 99% of existing pollution, are in violation of the legally binding document signed by DOE and NASA in 2010. The communities affected by the site throughout decades of its operation and dormancy deserve to have the site cleaned to levels most protective of human health and the environment. The DOE's excuse for cleaning to a less protective standard is not valid, claiming that there would be more environmental impact cleaning up the contamination, than leaving it in place, as the amount of contaminants and radiation left behind would be nowhere near the protective level set by the EPA for plants and wildlife. Their claim of not being able to find a suitable replacement soil that would meet the AOC cleanup requirements to fill in the excavations also shows a willingness to ignore facts. In their own DEIS, the DOE admits that Gillibrand soil is the best option for replacement and backfill as it is practically harmless to human health, thus demonstrating their contradictory statements. In all instances the levels of chemicals and radionuclides in Gillibrand were below the AOC LUT values, with two minor exceptions that the DOE declared nonhazardous to human health and the environment. Also in the DEIS are claims that transportation of the amounts of contaminated soil from the site that would be necessary for cleanup to meet AOC levels would be more harmful to the nearby community than just leaving it in place. However, the DOE has greatly inflated the amount of truckloads necessary for soil transportation in order to frighten the community into stepping in line with their desire to avoid their cleanup duties. It is important to note that the DOE has refused to consider alternative transport routes that pass by no residences, and options such as rail lines located within a mile of the site or even conveyor systems to eliminate the need for trucking

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587-1 DOE acknowledges your concern about cleanup of SSFL to levels specified in the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Regarding your comment about the community waiting for decades for cleanup of the contamination, please note, DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

587-2 DOE is committed to a cleanup of contamination in Area IV and the NBZ that meets the purpose and need to be protective of the environment and the health and safety of the public and workers, and has proposed alternatives to meet this commitment. Consistent with NEPA requirements, this Final EIS addresses the potential impacts that implementing each of the alternatives could have on several resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and traffic. Potential risks to biological resources and to public health and safety under all the proposed alternatives are presented in Chapter 4, Section 4.5; and Section 4.9 and Appendices G and K, of this EIS, respectively. In response to public comments on the Draft EIS, this Final EIS was revised to more

Commenter No. 587 (cont'd): Kiryl Karpiuk

altogether. The DOE has continued to focus on four transport options which involve a sixty mile drive to a train depot which does not yet exist. DOE has refused to research these possibilities claiming that doing so would result in significant delays to completion of the project. Seeing as how the site was meant to be clean by 2017 and work has yet to start, this no longer seems like a valid reason for leaving vast amounts of contamination in place. The community has been waiting for decades for this contamination to be cleaned up, while the polluters made sloppy attempts to get out of their responsibilities- we can afford to wait a little while longer for honest and thorough work to be done. While there are many other examples of excuses such as these, the bottom line is that the Department of Energy is attempting to weasel its way out of a binding legal contract. If we as private citizens attempted to do so, we would find ourselves facing unwinnable lawsuits. It is not like the DOE is trying to get out of its unfavorable two-year cell phone contract, it is trying to get out of a contract that ensures the safety and health of the countless people affected by the contamination at the SSFL, so then why is it not held to the same standard? I urge the DOE to open their ears to the overwhelming public and governmental condemnation, and to abandon the offensive cleanup alternatives proposed in the draft Environmental Impact Statement that violate the AOC.

Sincerely,

Kiryl Karpiuk

**587-5
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587-3 DOE disagrees and notes that the statements are not contradictory. The 2010 AOC does not allow consideration of risk and requires all chemicals and radionuclides in backfill soil to be below their respective LUT values in order for the soil to be used in Area IV. DOE notes that it violates the 2010 AOC to determine that a backfill source is “close enough.” As stated in the AOC, all chemicals above the LUT values are exceedances and should be remediated. Refer to Section 2.3, “Suitable Backfill Soil,” of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source, including interactions with DTSC.

**587-1
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587-4 The volumes in the Draft EIS have a sound engineering basis. DOE used the GIS (geographic information system) database for Area IV to identify on a point-by-point basis, any sample location that had an exceedance of a LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, develop areas and depth of exceedances, and then the calculation of the soil volume exceeding the LUT values. The volumes were independently reviewed by a separate team that validated the calculations.

Since the Draft EIS was prepared, DOE has independently checked the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data, and recognizing the shallow soil depth over uneven bedrock across Area IV and the NBZ DOE is not as uncertain about the upper limit of the soil volume estimate as it was at the time the Draft EIS was prepared.

587-5 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

Commenter No. 588: Stephanie Jung

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

I am worried about DOE's failure to comply with the AOC agreement that was signed in 2010. This lack of consideration is going to have a detrimental impact to the communities that directly surround the SSFL. The DEIS proposes four alternatives that leave either 39%, 91%, 99%, or 100% of the contamination which infringes on the agreement that states the DOE would clean up all of the contaminants that are on the SSFL. Furthermore, the DTSC is the only one with authority to decide how much of the contaminants need to be cleaned. The DOE has come up with constant excuses for their lack of ownership of their actions and the community will be the one who has to face the repercussions. The DEIS is proof of how irresponsible the DOE is, and that they are attempting to get away with an immense amount of damage that they have done to community. I am concerned about the DOE's DEIS because it does not state that they will follow up on their original AOC agreement.

Stephanie Jung

588-1

588-1 DOE acknowledges your preference for compliance with the 2010 AOC agreement. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

588-2

DOE recognizes DTSC's authority over the cleanup at SSFL. DOE recognizes that DTSC needs to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC and DOE-prepared RCRA closure plans for building demolition.

Commenter No. 589: Olivia Raine

A legally binding contract is legally binding, except to the government whenever it so chooses. The DOE has been ordered to hold itself accountable and clean up this site. Government accountability is so very low in this country, which is a serious shame when citizens' health is seriously at risk. Do your jobs, just like the rest of the country is ordered to do or be fired and replaced. You're the government, be accountable to your constituents and the land.

Olivia Raine

589-1

589-1

DOE acknowledges your concern about cleanup of the site in compliance with a legally binding contract. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 590: Christine Corr

PLEASE! Do not leave contaminants on-site! This site MUST be permanently cleaned up, 100%. PLEASE remediate the pollution this contamination has caused, and help mitigate future health issues for surrounding communities.

Thank you,
Christine Corr

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|| 590-2

590-1 DOE acknowledges your preference for 100 percent cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

590-2 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD for accurate information regarding offsite contamination.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Commenter No. 591: Charlene Rothstein

After 20 years of involvement with the SSFL beginning with an HOA, the PTA and for the past 9 years with the West Hills Neighborhood Council Environment Committee, these are my conclusions: 1) Clean up should be health risk based with as much on site remediation as possible. 2) The number of trucks used to remove contaminated soil should be kept to the lowest possible number as well as those used to replace soil. The surrounding communities are keenly aware of the safety issues involved in moving trucks and soil through their neighborhoods. Some Neighborhood Councils have requested that NO trucks move through their communities. 3) A request should be made for a current area cancer study to be done by the CDC.

CHARLENE ROTHSTEIN

591-1

591-1 DOE acknowledges your support for site cleanup based on health risk. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

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As discussed in Chapter 2, Section 2.3.2, of this Final EIS, one potentially effective form of onsite remediation would be to use monitored natural attenuation for management of certain low-concentration, petroleum-contaminated (TPH) soil. DOE has estimated that this onsite treatment method would reduce the amount of soil to be considered for removal at Area IV and the NBZ by about 620,000 cubic yards, with corresponding reductions in truck traffic and emissions of air pollutants. This or any other onsite treatment method would have to be approved by DTSC.

591-3

591-2 DOE acknowledges your concern about truck traffic in neighborhoods near SSFL. Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

591-3 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

Commenter No. 592: William McNally and Barbara L Rain

We are writing to inform you that my wife, Barbara Lisa Rain, born December 1957 in Encino, CA resided at her family's single-family residence in Granada Hills (XXXXXXXXXXXXXXXX) from 1958-1976, approximately 4-5 miles north by northeast of the elevated Santa Susana Nuclear Laboratory Accident Site. At the time of the Accident, estimated to be June-July 1959, Barbara was an 18 month-old infant, probably outdoors and downwind from the nuclear reactor Site perched on a bluff overlooking the northwestern corner of the San Fernando Valley. Between 1970-71, Barbara's father, an MD internist, noticed she had a goiter and in fact her thyroid, which is naturally supposed to turn-on at puberty, did not function. Since 99% of thyroid failures have to do with exposure to toxic and radioactive substances it is safe to conclude that Barbara, as a 1 1/2 year old infant, perhaps during the event, was outside and directly exposed to the burst of radiation. Even if she were not directly exposed, the yard grass and pavement she daily played upon was. Everything in the area had been sprinkled lightly with cancer-causing radioactivity. Infants, we now know, are the most vulnerable to radioactive exposure. For the past 48 years Barbara has had to take thyroid medication to compensate for her non-functioning thyroid. Over the decades she has been exposed to the wide-ranging, always changing medical protocol for taking thyroid medication. From the 1970s through the 90s Barbara took 240 mg./day of natural thyroid. Since then, that dose has been reduced to 90 mg./day Over the years, there has been an on-going campaign to eliminate natural thyroid in favor of synthetic, a cheaper material. Currently she is bureaucratically fighting her medical provider, Kaiser, over what thyroid materials are approved and which are not, i.e. natural vs. synthetic. Over the years the medical community has utilized and denied the very same treatment protocol. In a certain sense Barbara knows more from her personal experience than a young medical resident. In short, the travail over not having a functioning thyroid and its impact on her health maintenance goes on every single day. This daily hassle of compensating for a non-functioning thyroid is not something we want anyone to experience. There should be no equivocating from the government regarding the removal of radioactive toxic materials, especially since this was in fact a government created and covered up problem, one the medical community struggles to get agreement over. Five years ago an activist concerned with the water runoff of the Santa Susana accident site into adjacent neighborhoods showed me a number of official studies done by the State and by the Feds over the radioactive toxicity (perchlorate, tritium) at the Site and its gravitational migration down into surrounding areas. There can be no moral slippage. The

592-1

592-1 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE (and its predecessor agency) has not kept the SRE accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atomic International 1959). The accident was also described in detail in a reactor safety textbook, "The Technology of Nuclear Reactor Safety" published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html.

592-2 DOE acknowledges your concerns about cleanup of a health hazard and government equivocating over removal of radioactive toxic materials. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Regarding your comment about a government created and covered up problem that still exists, please note, DOE and its contractors assigned unique identification numbers to

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Commenter No. 592 (cont'd): William McNally and Barbara L Rain

government (Department of Energy) and Boeing are obligated to clean up a health hazard -- if these studies are to be believed -- they created in a residential community that still exists. Emotionally, Barbara was furious that the 1959 nuclear accident was for thirty years kept a secret from those very citizens who were exposed to the dangerous radiation. This subterfuge was malice. Now you, Dept. of Energy, have the opportunity to make sure no one else loses their thyroid over government malfeasance. Thank you.

William McNally & Barbara L Rain
Los Angeles, CA

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272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE will complete cleanup of Area IV and the NBZ pursuant to published decisions in accordance with this Final EIS.

592-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

592-4 Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer. Because of public concern about the accident, DOE hosted an informational workshop on August 29, 2009, with testimony from 3 independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes; one expert was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

Commenter No. 592 (cont'd): William McNally and Barbara L Rain

DOE has not kept the SRE accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atoms International 1959). The accident was also described in detail in a reactor safety textbook, "The Technology of Nuclear Reactor Safety" published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html.

Commenter No. 593: Judy Mayer

You must fulfill your commitment to do the full cleanup! Toxic chemicals were used on the site, which have leached into the soil. IOIF1 The health of the residents of Simi Valley and surrounding areas depend on a proper cleanup.

Judy Mayer

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- 593-1 DOE acknowledges your preference for a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. All of the action alternatives evaluated are protective of public health and safety and the environment.
- 593-2 Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 594: Richard Mathews

On behalf of the North Valley Democratic Club and as its president, we ask that you try again on your SSFL Draft Environmental Impact Statement. You signed a contract, the Administrative Order on Consent (AOC), with the people of California. The cleanup promised in the contract is a debt that you owe us. It is unconstitutional under the Fourteenth Amendment to question a debt of the United States. That is what you have done with this DEIS. This is a violation of your oath of office. None of the proposed alternatives fully implement the AOC. Several explicitly and intentionally violate the agreement. This is unacceptable. It is illegal. DOE's draft EIS fails to acknowledge that the AOC is a legally binding agreement, which DOE cannot choose to ignore unilaterally. DOE as the polluter doesn't have the authority to decide how much of the mess that it made is going to get cleaned up. The decision rests with state Department of Toxic Substances Control. The three alternatives (other than the required baseline alternative) would respectively leave up to 39%, 91%, and 99% of the contamination on site, where it can continue to migrate and put nearby communities at risk. The AOC requires that all detectable contamination above background levels must be eliminated. It makes sane exemptions for protecting cultural artifacts and sensitive species, but it requires DOE to do as much cleanup as possible around those. Even your best alternative fails to do that. You agreed to cleanup to background levels, but now you propose using a dubious risk-based standard. Even if that were allowed, you fail to consider all of the risks from your pollution moving off of the site. Runoff from the site feeds the Calleguas Creek which is used to water the crops in Ventura County, making an agricultural rather than residential standard applicable. The residential standard does not consider the risks to wildlife in this open space. And you misuse the tables for even the residential standard. Instead of using the EIS process to debate WHETHER to follow the agreement, use it to decide HOW to fully implement it. We fully support considering alternatives to using trucks. We fully support considering alternative routes for trucks. We fully support considering alternatives on how to separate contaminated from uncontaminated material in order to reduce the amount of material that needs to be moved. We fully support considering alternatives for maximizing cleanup in areas where cultural artifacts or sensitive species make cleanup difficult. We fully support considering alternatives for how to restore the site to its natural state. The

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594-1 DOE acknowledges your concern about a thorough cleanup in compliance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Regarding your comment about leaving the site as open space, Boeing is the landowner of Area IV and the NBZ, and intends to maintain its portion of SSFL as undeveloped open space, and to restrict future land use to prevent development for residential, agricultural, or commercial purposes (see Chapter 1, Section 1.5, of this Final EIS). A significant change in circumstances occurred after issuance of the Draft SSFL Area IV EIS. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

With respect to the timeliness of cleanup, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). The

Commenter No. 594 (cont'd): Richard Mathews

AOC has strong support throughout our community. Public comment on the AOC ran 100 to 1 in favor. The Los Angeles City Council (mostly Democrats) has unanimously called for following the AOCs. So has the Simi Valley City Council (all Republicans). And the Ventura County Supervisors. And the Los Angeles County Supervisors (the site is on the border between the two counties). Cleanup of SSFL to background is the position of the California Democratic Party and of the six Democratic clubs surrounding the site based in Northridge, Simi Valley, Moorpark, Thousand Oaks, Topanga, and Encino. We want a cleanup NOW. We want a cleanup that is THOROUGH. We want to be left with open space we can be proud of—that is restored to the natural state in which you found it some 70 years ago.

Richard Mathews
North Valley Democratic Club

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completion of both the CEQA and NEPA processes must occur before DOE can complete the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

594-2 DOE recognizes that the AOC is a legally binding agreement. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. This Final EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input since the 2010 AOC was signed, the EIS also analyzes alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ. For additional discussion of these topics please refer to CRD Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD. Additional information on alternatives analyzed is in Chapter 2 of this Final EIS.

594-3 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE's response to concerns about offsite impacts.

594-4 Risks to wildlife, based on an ecological risk assessment, were added to Chapter 4, Section 4.5 of this Final EIS.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements)

Commenter No. 594 (cont'd): Richard Matthews

with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLs that do not include the indirect garden pathway is appropriate for this land use.

In this Final EIS (see Chapter 2, Section 2.4) DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Residential Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario including only the direct pathways and without a garden (indirect) pathway. Based on the future use of SSFL as open space, this latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

- 594-5 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.
- 594-6 As part of the soil treatability studies, DOE did look at means of reducing soil volume. Measures considered included soil particle separation and soil washing. However, because any detectable concentrations in a treated soil would violate the LUT requirements, and soil washing would sterilize soil requiring adding soil amendments that would exceed LUT requirements, it would not be possible under the AOC to perform the reduction suggested in the comment.
- 594-7 DOE acknowledges your preference for alternatives that maximize cleanup in areas where cultural artifacts or sensitive species make cleanup difficult. Please refer to Sections 2.1, "Preferences for Cleanup," and 2.3, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD, which provides a discussion

Commenter No. 594 (cont'd): Richard Mathews

of these topics of interest and DOE's responses. All of the soil remediation action alternatives involve cleanup of chemicals and radionuclides that exceed risk-based standards within the biological and cultural exemption areas established in accordance with the 2010 AOC.

594-8 Please refer to Section 2.1, "Preferences for Cleanup," of this CRD, for further discussion of this topic.

Commenter No. 595: Anonymous

The DOE needs to comply with the AOCs which offer the public a truly protective cleanup. The issue of the truck routes has not been looked at adequately given there are alternatives including northern routes and covered conveyors which would eliminate the need for trucks to go near homes. The DOE does not have the authority to decide HOW much of the nuclear and chemical contamination to clean up. That is for the DTSC to decide. The DOE needs to find out HOW to clean up to the agreed up level not whether or not to do so. The fact that at the DOE public meeting on this topic that the DOE focused solely on wildlife and flowers and trucks instead of how much less dangerous it would be for the thousands of people living nearby is repulsive and shows that the DOE is using publicity stunts to try to get out of paying for something that will save lives. DO THE RIGHT THING PLEASE

Anonymous

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595-1 DOE acknowledges your concern about compliance with the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Each alternative addresses the potential impacts that implementing the alternative could have on several resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and traffic. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

595-2 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

595-3 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a Record(s) of Decision (ROD[s]) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public

Commenter No. 595 (cont'd): Anonymous

input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

DOE recognizes that DTSC has authority over the cleanup decision. As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 596: William Preston Bowling

Dear U.S. DOE, Please clean up your responsible portions of the Santa Susana Field Laboratory including the Bowl in AREA I to the standards agreed to in the 2010 Administrative Orders on Consent.

William Preston Bowling
Aerospace Contamination Museum of Education

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DOE acknowledges your preference for cleanup of SSFL in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. DOE is not, however, responsible for cleanup of Area I at SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 597: Anonymous

Nothing matters more than the lives of our children, our families. Please do the right thing. Save our health, save our lives. Please clean it all up.

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Anonymous

597-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

597-2 DOE acknowledges your preference for a full cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 598: Matthew E. Chin

The DOE needs to abide by the 2010 AOC they signed and clean up the site to those standards.

Matthew E Chin

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DOE acknowledges your preference for cleanup of SSFL in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 599: Gabe Sanchez

I consider the Department of Energy's recent draft Environmental Impact Statement (EIS) regarding the Santa Susana field laboratory contamination to be both controversial and deceitful. In particular, I have taken issue with the new proposed alternative cleanup solutions that have been offered by the Department of Energy (DOE) in the EIS. These alternative solutions are first off in violation of the Administrative Order on Consent (AOC) which both National Aeronautics and Space Administration (NASA) and DOE signed in 2010. The AOC states that both NASA and DOE are obligated to cleanup the contamination to background levels. Secondly, the alternative solutions proposed by the new EIS will leave behind anywhere from 39-99% of the contamination; the AOC bars any "leave in place" cleanup solutions. If DOE follows through with the EIS and leaves any contamination in the area, it still leaves the threat of the contamination moving off site and affecting other areas near by. Although I was raised in South Central Los Angeles, my family has been trekking up to the San Fernando Valley almost every weekend for their photography business. I would hate to see any of my family contract a radiation based cancer or illness. DOE claims the contamination in the area isn't that much of a concern because SSFL had the most advanced and safest technology. The contaminations we are dealing with today prove this to be false. SSFL had over 30,000 rocket tests conducted there, which resulted in the release of hazardous contaminants in the environment that we are now dealing with. Not only that, but an unprincipled sodium burn pit was also used in the area the DOE is tasked with cleaning up. The practice of burning sodium is no longer used for disposal because it leaves behind traces of PCBs, mercury, dioxins and radioactive contamination. This burning not only released contaminants into the soil, but also into the air of nearby cities. The laboratory kept spewing contaminants into the environment until 1989 when pressure was put on these companies by non profit groups to cease operations. That's decades of work done at SSFL, most to all of which produced hazardous contamination that has been proven time and time again to migrate off site by Boeing's monitoring reports of contamination levels in water run-off, where numerous exceedances of safe limits have been logged. According to Chapter 3 of the EIS, PCB's, PAHs, dioxins, and herbicides "often adhere to soil particles and can travel along drainage

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599-1 DOE acknowledges your concerns about a full cleanup to a background level of contamination in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also note that NASA was not a signatory to the 2010 AOC.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Regarding your concern about the timeliness of cleanup, please note that in prior cleanup actions DOE removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices (see Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD). Please also refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). The completion of both the CEQA and NEPA processes must occur before DOE can complete the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by

Commenter No. 599 (cont'd): Gabe Sanchez

pathways as the sediment is carried in surface water” (3-32). Another concern from this EIS is the fact that the polluter themselves, DOE, are the ones deciding how much they are going to clean up. DOE does not have the authority to do this and must follow the standards set by the AOC. This decision lies with the Department of Toxic Substances Control, which sets the standards for the amount of contamination allowed under the AOC. The fact that these agencies have been purposely lying to the public for so long without consequence is unacceptable. There is no doubt that the lab’s radioactive contamination, from particles such as cesium-127 and plutonium-238, are causing cancer in the area. Patterns of rare cancers in the area suggest that the lab is the source of these cancer causing contaminants. A cleanup has been delayed for far too long. At this point, the community has the right to know how their community is going to be taken care of with full transparency. I find it deeply troubling that you generated and then proceeded to discontinue an email address specifically made for comments on the draft EIS, and only after the public began using it for its intended purpose. Seven years ago the communities affected by the Santa Susana incident were promised a full clean up, however, they have yet to see any real effort by the companies responsible. It is time to stop negotiating the facts and start cleaning up the mess that is causing multiple cases of rare cancer in the area. A full cleanup to background level of contamination should be executed as soon as possible.

Gabe Sanchez

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the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June of 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

599-2 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

599-3 DOE acknowledges your concerns and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Much cleanup has previously been performed. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives would be protective of the health and safety of the public and the environment.

599-4 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent

Commenter No. 599 (cont'd): Gabe Sanchez

with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a Record(s) of Decision (ROD[s]) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

DOE recognizes that DTSC has authority over the cleanup decision. As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). The Area IV and NBZ site cleanup activities covered by this Final EIS would begin following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.599-5 As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of this topic. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the

Commenter No. 599 (cont'd): Gabe Sanchez

potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

599-6 DOE apologizes for the confusion over the email address. The email address was previously created for scoping comments, not for comments on the Draft EIS. The email address was discontinued when DOE realized stakeholders had begun to use it for comments on the Draft EIS. In order to better track comments, DOE determined the website was the best method for electronic comments.

Commenter No. 600: Natalie Gates

As a student currently studying government, and committed to dedicating her life to public service, when a public agency fails to hear its constituents' calls, it undermines the principles of liberalism upon which the United States' state and federal governing system is founded. In 2010, the Department of Energy signed the Administrative Order on Consent (AOC) committing the department to cleaning up all detectable contamination at Santa Susana Field Laboratory by 2017. It is 2017 and nothing has been done. Rather than cleaning up the location, the DOE released a Draft Environmental Impact Statement that fails to acknowledge that the AOC is a legally binding agreement, which the DOE cannot choose to ignore unilaterally. As the polluter, the DOE does not have the authority to decide how much is to be cleaned up, the decision rests with DTSC. The draft proposes three alternative cleanup plans rather than the cleanup agreed upon in the 2010 AOC for Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory. These alternatives violate the previous commitments the DOE made in 2010, moreover, the three alternatives would leave 39%, 91% or up to 99% of the contamination on site. A study conducted by Dr. Hal Morgenstern from University of Michigan found within a 2 mile radius of the contamination site, the cancer risk increases 60%. In 2012, the EPA sampled the site and found through well and water runoff, chemicals such as TCE were 134 times higher than the Safe Water Drinking Act limits. There is mounting evidence of clusters of rare pediatric cancers within 20 miles of the contamination site. Contamination is transboundary: soil containing radionuclides travels due to wind, water carries pollutants to its destination. Contamination does not abide by fences and walls. Surrounding communities are at risk of contamination due to natural forces, and the ailments subjecting the people are preventable if the area is cleaned up as promised in 2010. There is not time to wait 70 years for a site to cleanse itself, people are dying and will continue to. Government agencies are meant to serve the people, and when the people are dying, it is way beyond the time one should have acted. Remember that these agencies serve at the pleasure of the people, remember that a legal agreement is a legal agreement, remember that a law is a law, these are undeniable facts. It is time make sure the job the DOE has legally obligated itself to do, is done. Justice must come for the people affected, and ramifications must be dealt for injustice. Out of all the comments on the AOC, only 1% opposed the cleanup standards being put into effect. The community spoke, and the stringent clean up is demanded. Do the RIGHT thing here, not the cheap and easy thing.

Natalie Gates

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600-1 DOE refers you to Section 2, "Topics of Interest," of this CRD for responses to your comments. Section 2.1, "Preferences for Cleanup," of this CRD addresses commenters' stated or implied preferences for cleanup and/or a particular alternative. Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD responds to the assertion that none of the alternatives complies with the 2010 AOC and addresses comments about the quantities of soil exceeding 2010 AOC LUT values that would remain on site under each alternative. Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD indicates that in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

With respect to the timeliness of additional cleanup, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision (ROD) pursuant to NEPA. Additionally, in accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]) The completion of both the CEQA and NEPA processes must occur before DOE can start the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. In June 2017, DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

600-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable

Commenter No. 600 (cont'd): Natalie Gates

alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

DOE recognizes that DTSC has authority over the cleanup decision. As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under the California Environmental Quality Act that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). The Area IV and NBZ site cleanup activities covered by this Final EIS would begin following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC’s Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

600-3 DOE acknowledges your concerns and refers you to Section 2.1, “Preferences for Cleanup,” of this CRD regarding your support for cleanup per the 2010 AOC, Section 2.7, “Offsite Impacts,” of this CRD regarding your concern about the risks of contamination due to natural forces, and Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL, including limitations of studies such as Dr. Morgenstern’s. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies

Commenter No. 600 (cont'd): Natalie Gates

that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Consistent with law as embodied in NEPA, DOE has prepared this EIS to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. All of the action alternatives evaluated for cleanup of Area IV and the NBZ, including those that rely on monitored natural attenuation, are protective of the health and safety of the public and the environment.

- 600-4** Chapter 3, Section 3.4.3, of the Draft EIS discussed the presence of TCE in five areas of groundwater: the Former Sodium Disposal Facility, the Building 4100/Building 4056 landfill area, the radioactive Materials Handling Facility, the Hazardous Material Storage Area, and the Metals Clarifier area. DOE performed additional groundwater investigations and reported the results in the *Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California* (CDM Smith 2018a). The text of this Final EIS has been updated with information from the remedial investigation, including the concentrations of TCE found in these groundwater plumes. As stated in Chapter 2, Section 2.6, of this Final EIS the 2007 Consent Order and RCRA requirements require the groundwater cleanup standards be risk-based, meaning the concentrations of any contaminants remaining in groundwater following remediation will pose an acceptable risk to future groundwater users.
- 600-5** Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 601: Susan Stolla

If you refuse to thoroughly and definitively clean up this mess, you will have to live with what you have done to many people, and this contamination will remain to harm countless others. This contamination does not go away by itself. I see that our congressman knight wants to save some of the towers and other junk so that innocent people can come and view this part of history and share even more of the side effects of contamination. This effort to turn a toxic zone into a tourist haven and put a feather in his cap is bound to back fire. How you have managed to get away with refusing to clean it up, in spite of the documented proof of the harm it has done is beyond me. Please clean this mess up once and for all.

Susan Stolla

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DOE acknowledges your concern about a thorough and definite cleanup of the site. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible (note that the towers referred to in the comment are not in Area IV or the NBZ). Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Commenter No. 602: RL Miller

The only cleanup that is acceptable is a cleanup to background. The California Democratic Party and Ventura County Democratic Party both expect DOE to honor the AOCs and clean up in full, to background level, before deciding what to do with the test stands and the land.

RL Miller
California Democratic Party; Ventura County Democratic Party

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DOE acknowledges your preference for cleaning the site to background in accordance with the AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please note that DOE is not responsible for the disposition of rocket engine test stands or any contamination resulting from activities that took place outside of Area IV or the NBZ. Regarding your comment about deciding what to do with the land, Boeing is the landowner of Area IV and the NBZ, and intends to maintain its portion of SSFL as undeveloped open space and prevent development for residential, agricultural, or commercial purposes (see Chapter 1, Section 1.5, of this EIS). In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

Commenter No. 603: Erin Reimer

I grew up in Santa Susana and lived there most of my life. Until I was a teenager, the sound of Rocketdyne was so commonplace that it was my first thought when hearing the rumble of an earthquake, and the sound was unforgettable even after moving away. It is incredible that such important testing for humanity's first forays into space were undergone so close to the Los Angeles metropolitan area, and even more incredible that the same land is an ancient Chumash astronomical observatory and sacred site. The cultural and natural history of the Santa Susana Field Lab and Burro Flats is irreplaceable. While waste was not properly handled at the site in the past, tearing down the test stands that play such a major role in history does not seem like the way to go. I stand with the honorable Reps. Steve Knight, R-Lancaster; Julia Brownley, D-Westlake Village; Adam Schiff, D-Burbank; Tony Cardenas, D- Panorama City; Brad Sherman, D-Sherman Oaks; and Ted Lieu, D-Manhattan Beach in pleading for the cultural history and natural resources to be preserved to the extent possible during this remediation. Even if the actual site of the field lab was cleaned of contaminants, what about the chemicals which have already contaminated the mountain itself? I hope that this EIS cleanup is not pretext for giving the "all-clear" for more residential and commercial development at or near the site. The Santa Susana mountains and Simi Hills are beautiful, but development has grown so rapidly just below the SSFL. Unfortunately how the waste was handled on top of the mountain has contaminated the groundwater, and allowing more development to occur downstream (Runkle Canyon, Bell Canyon, Andorra Estates) could be placing the health of thousands at risk. What of the findings of contamination at nearby Brandeis Bardin institute? Will cleanup occur there as well? The whole mountain and canyons below should be designated a monument to protect from further development. I will continue to follow the efforts closely, and I greatly appreciate all the work that NASA, Boeing, DOE, EPA, California Environmental Protection Agency, and other concerned citizens have taken for this historic venture.

Thank you,

Erin Reimer
Humboldt State University

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603-1 DOE recognizes the breadth of resource values in Area IV and the NBZ and intends to protect human health without unduly damaging the environment. This is reflected in the range of alternatives DOE developed and analyzed, which allows a comparison of impacts among the various resource areas, including cultural resources. Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process that will be used to determine exemptions. Please also note that the test stands are not in Area IV or the NBZ, and thus are not part of the analysis presented in this Final EIS.

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As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. The environmental monitoring program for Area IV is extensive and addresses the potential for the spread of contamination from Area IV to offsite areas. The results of this monitoring program are provided in annual environmental monitoring reports (see http://www.etec.energy.gov/Environmental_and_Health/ASER.html). Information about this monitoring program can be found at the Energy Technology Engineering Center website (<http://etec.energy.gov>). Environmental contamination on and off the SSFL site has been remediated as the need was identified considering data obtained from this environmental program as well as other media sampling programs conducted by DTSC, EPA, and several other organizations. DOE expects that any contamination that may be discovered outside of SSFL, attributable to SSFL activities, and posing a hazard to the public or the environment would be remediated in accordance with State and Federal requirements.

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Commenter No. 603 (cont'd): Erin Reimer

- 603-3 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. There is no potential for the property to be redeveloped under these covenants.
- 603-4 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

Commenter No. 604: Theodore Dent

In January, when I went from perfect health to Terminal Brain Cancer, Stage 4, the oncologist only asked if I had ever been exposed to radiation. Living in Chatsworth Lake Manor in the 1960s and 1970s was my only response. I think future generations need the best possible cleanup.

Theodore Dent

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- 604-1 DOE refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 604-2 DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 605: Jason C. Compton

Dear Ms. Jennings:

I am outraged by the DOE’s Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

DOE’s DEIS makes it abundantly clear that DOE wants to break out of its commitment to clean up all of its contamination at SSFL. However, the Administrative Order on Consent (AOC) that DOE signed in 2010, commits the DOE to clean up all detectable contamination. We want 100% of the dangerous radionuclides and toxic chemicals on site cleaned up. We are tired of it migrating and putting nearby communities at risk. It is unacceptable and reprehensible!

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the “no action” alternative for soil remediation, all of which are prohibited under the AOC. Any “leave in place” cleanup methods, including natural attenuation and “no action” and should not be considered.

DOE also fails to acknowledge that the AOC is a legally binding agreement with the DTSC, and DTSC as the regulator makes the cleanup decisions, not DOE. The legal obligations in the AOC already require full cleanup, and even if it didn’t exist, the state toxics agency is the regulator who decides cleanup requirements for the toxic chemicals. That isn’t within the power of the polluter, DOE. DOE should withdraw the EIS, as it violates cleanup commitments and DOE has no legal authority to decide the cleanup in the first place.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will continue to be at increased risk of cancer and illnesses related to exposure to SSFL contaminants. I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE’s final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

I also demand that DOE initiate and utilize a site to rail transport plan for the clean up process and that they refrain from scaremongering local communities with talk and propaganda regarding a potential traffic

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605-1 DOE acknowledges your concern about cleaning up all detectable contamination at SSFL in accordance with the 2010 AOC and using site to rail transport. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information, including the appropriate use of natural attenuation. Please also refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of the consideration of transportation options.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, this EIS also evaluates alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

605-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE’s cleanup of Area IV and the NBZ.

Commenter No. 605 (cont'd): Jason C. Compton

traffic impact if trucks are used. Traffic should be the least of everyone's concerns!! Radionuclides and other contaminants are much deadlier and have made many community members ill, and some have died from their illnesses, including children. My own son had leukemia twice, before the age of 5, and two of our immediately adjacent neighbors, both in their early 30's at the time, were also fighting cancers (breast and thyroid). All three cancers are radiation related types. We demand 100% full clean up utilizing site to rail transport, in a timely manner! There's no room for nuclear waste in our communities!!!

Jason C. Compton

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This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues its Notice of Determination for the Program EIR, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

605-3 DOE acknowledges preference for cleanup in accordance with the 2010 AOC and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please refer to Section 2.7, "Offsite Impacts," of this CRD for accurate information on contamination in the environment around SSFL and to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and

Commenter No. 605 (cont'd): Jason C. Compton

workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completion of cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in cleanup of Area IV and the NBZ that would be protective of the public health and safety and the environment.

605-4 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, this EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this EIS provide details of the transportation risk analysis.

Commenter No. 606: Maggie B. Compton

Dear Ms. Jennings:

I am outraged by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

DOE's DEIS makes it abundantly clear that DOE wants to break out of its commitment to clean up all of its contamination at SSFL. However, the Administrative Order on Consent (AOC) that DOE signed in 2010, commits the DOE to clean up all detectable contamination. We want 100% of the dangerous radionuclides and toxic chemicals on site cleaned up. We are tired of it migrating and putting nearby communities at risk. It is unacceptable and reprehensible!

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation, all of which are prohibited under the AOC. Any "leave in place" cleanup methods, including natural attenuation and "no action" and should not be considered.

DOE also fails to acknowledge that the AOC is a legally binding agreement with the DTSC, and DTSC as the regulator makes the cleanup decisions, not DOE. The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the state toxics agency is the regulator who decides cleanup requirements for the toxic chemicals. That isn't within the power of the polluter, DOE. DOE should withdraw the EIS, as it violates cleanup commitments and DOE has no legal authority to decide the cleanup in the first place.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will continue to be at increased risk of cancer and illnesses related to exposure to SSFL contaminants.

I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination. I also demand that DOE initiate and utilize a site to rail transport plan for the clean up process and that they refrain from scaremongering local communities with

606-1 DOE acknowledges your concern about cleaning up all detectable contamination at SSFL in accordance with the 2010 AOC and using site to rail transport. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information, including the appropriate use of natural attenuation. Please also refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the consideration of transportation options.

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DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, this EIS also evaluates alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

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606-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ.

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Commenter No. 606 (cont'd): Maggie B. Compton

talk and propaganda regarding a potential traffic traffic impact if trucks are used. Traffic should be the least of everyone's concerns!! Radionuclides and other contaminants are much deadlier and have made many community members ill, and some have died from their illnesses, including children. My own son had leukemia twice, before the age of 5, and two of our immediately adjacent neighbors, both in their early 30's at the time, were also fighting cancers (breast and thyroid). All three cancers are radiation related types. We demand 100% full clean up utilizing site to rail transport, in a timely manner! We have already waited over half a century for a clean up plan to be implemented.

Maggie B. Compton

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This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017]). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

606-3 DOE acknowledges preference for cleanup in accordance with the 2010 AOC and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please refer to Section 2.7, "Offsite Impacts," of this CRD for accurate information on contamination in the environment around SSFL and to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and

Commenter No. 606 (cont'd): Maggie B. Compton

workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completion of cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in cleanup of Area IV and the NBZ that would be protective of the public health and safety and the environment.

606-4 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of the transportation topic and DOE’s response.

The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of SSFL. In accordance with NEPA, this EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE’s intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to remediate the site, the larger the transportation effort (i.e., a larger number of truck trips) required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this EIS provide details of the transportation risk analysis.

Commenter No. 607: Ryan A. Compton

I am 11 years old and had leukemia two times before I turned five. I also had a bone marrow transplant. Two of my neighbors were sick at the same time as me. One of my friends also had leukemia and she died. She was only five years old. We all live in Simi Valley. I want the Department of Energy to clean up 100% of their mess so that no more people get sick, especially kids. Please do the right thing! Also use a train to take the bad stuff off the mountain, not trucks. And stop scaring people, please! Getting sick and dying because of pollution is way worse than traffic. Even an 11 year old knows that!

Ryan A. Compton

607-1

607-1 DOE acknowledges your concern and refers you to Section 2.7, “Offsite Impacts,” of this CRD for accurate information on contamination in the environment around and to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

607-2

607-2 DOE acknowledges your concern about 100 percent cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for a discussion of this topic and DOE’s response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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607-3 Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.

Commenter No. 608: Ryan Compton

Dear Ms. Jennings: I am 11 years old. I had leukemia twice before I turned five and had to have a bone marrow transplant. My neighbors also had cancer at the same time I did. I think it's wrong that you won't clean up your pollution mess in our mountains. I want the Department of Energy to clean up 100% of their mess so that no more kids get sick. Please use trains to transport the bad stuff, not trucks. Thank you.

Sincerely,

Ryan Compton

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608-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information on contamination in the environment around and to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

608-2 DOE acknowledges your concern about 100 percent cleanup of the pollution mess in the mountains. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

608-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

**Commenter No. 609: Jay Coghlan, Executive Director,
Nuclear Watch New Mexico**

April 11, 2017

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Re: Comments on the Department of Energy’s Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory

Dear Ms. Jennings:

The long-delayed cleanup of the Santa Susana Field Laboratory (SSFL) is a familiar story to Nuclear Watch New Mexico. It goes like this: DOE operations release dangerous nuclear and chemical contamination into the environment, impacting both workers and neighboring communities. DOE minimizes the contamination and its impact on health, and drags its feet for decades on cleanup. DOE signs cleanup agreements that it does not keep, and DOE sites remain contaminated. Troubling issues regarding the SSFL cleanup were brought to our attention in August 2016, when we learned that while DOE broke its contract to fund the Community Involvement Fund of the New Mexico Community Foundation, it simultaneously funded a front group that lobbies against the SSFL cleanup. Funding from CIF was critical to several ANA groups, who were appalled by DOE’s conduct in the matter. Now more fully informed about the SSFL cleanup, we are pleased to submit comments on DOE’s DEIS for the site. SSFL was the site of nuclear activities that have left a legacy of contamination. SSFL once housed 10 nuclear reactors, one of which had a partial meltdown in 1959, and two others suffered accidents as well. A “Hot Lab” to cut up irradiated fuel from around the country was also sited at SSFL, as well as plutonium and uranium-carbide fuel fabrication facilities and a sodium burn pit used for open-air burning of contaminated reactor components. SSFL’s soil, groundwater, and surface water are contaminated, and this contamination has migrated off-site putting nearby communities at risk. Federal studies indicate elevated cancers among both workers and off-site populations near SSFL. In

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609-1 While the comment is not on the scope or content of this Final EIS the following information is being provided.

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013.

DOE’s Office of Environmental Management started the Community Involvement Fund (CIF) to increase public involvement in the environmental management decision-making process and assist stakeholder groups with analyzing environmental management plans and proposals. The CIF operated from late 2010 until September 2015, and distributed a total of \$1.6 million through 46 grants to 23 recipients around the country, including groups involved in observing SSFL cleanup preparation. These included:

- \$46,800 in 2011 to the Committee to Bridge the Gap.
- \$55,000 in 2012 to the SSFL Advisory Panel, partnering with the Committee to Bridge the Gap. The SSFL Advisory Board is not related to the SSFL CAG.
- \$23,000 in 2013 to Physicians for Social Responsibility – Los Angeles, partnering with the Rocketdyne Cleanup Coalition, Teens Against Toxins and Committee to Bridge the Gap.
- \$20,000 in 2014 to Physicians for Social Responsibility – Los Angeles, partnering with Teens Against Toxins and the SSFL Work Group, which is not related to the SSFL CAG.

609-2 Chapter 3, Sections 3.9.5 and 3.9.6, of this EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE

**Commenter No. 609 (cont'd): Jay Coghlan, Executive Director,
Nuclear Watch New Mexico**

2010, DOE finally signed an Administrative Order on Consent (AOC) with the California Department of Toxic Substances Control to clean up its operational area at SSFL to background levels of contamination. In 2012, DOE issued a notice entitled, "Public Participation in the Development of Alternatives to be considered in the Santa Susana Field Laboratory Area IV Environmental Impact Statement." In it, DOE stated that it was committed to the AOC and that its EIS would be limited to an examination of alternate ways to achieve the AOC cleanup standard. In 2014, DOE stated that its DEIS would be completed later that year, and projected that it would meet the 2017 deadline stipulated in the AOC for the cleanup to be complete. Unfortunately, the cleanup has yet to begin. DOE's DEIS was just released at the beginning of this year, and not one of the four alternatives proposed in it comply with the AOC cleanup agreement. Despite the AOC barring leave in place options, DOE's first alternative proposes not cleaning up 480,000 cubic yards of contaminated soil, which DOE preemptively excludes citing potential exemptions that do not meet the narrow exemptions permitted in the AOC. The second alternative proposes to leave in place up to a million cubic yards of contaminated soil by using a suburban residential risk-based cleanup that omits the required backyard garden component of a residential cleanup level. The third alternative proposes to not clean up as much as 99% of the contaminated soil, allowing levels of radioactivity hundreds of thousands of times higher than the U.S. Environmental Protection Agency's preliminary remediation goals. The fourth alternative proposes no cleanup at all. DOE's DEIS also does not acknowledge that DOE does not have the authority to make the decisions about how much contamination gets cleaned up. For chemicals, under the Resource Conservation and Recovery Act, that decision is made by DOE's regulator, the DTSC. For radiological contaminants, DTSC is also the regulator as stipulated in the AOC. Nuclear Watch New Mexico recommends that DOE revise its EIS to be fully compliant with the AOC cleanup agreement that it signed, and that it proceed to do so without delay. Communities living near SSFL have waited too long for the promised cleanup to occur. Sincerely,

Jay Coghlan
Executive Director Nuclear Watch New Mexico

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and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Therefore, Area IV and the NBZ are not highly contaminated.

609-3 Please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

609-4 Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

609-5 DOE's understanding regarding the implementability of a cleanup in accordance with the 2010 AOC has evolved since the agreement was signed. As discussed in Chapter 2, Section 2.3.3.1 of this Final EIS, DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under NEPA, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the health and safety of the public and the environment. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this EIS. The No Action Alternative was included as required by NEPA regulations and provides a baseline against which other alternatives can be compared.

DOE disagrees with the assertion that none of the alternatives complies with the 2010 AOC. Refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a description of how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC using the AOC LUT

**Commenter No. 609 (cont'd): Jay Coghlan, Executive Director,
Nuclear Watch New Mexico**

values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values). This section explains how monitored natural attenuation and use of exemptions are in accordance with the AOC. Also refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD, which discusses the processes DOE is following to establish the exemptions. Section 2.2 of this CRD also acknowledges that the soil remediation action alternatives leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. The No Action Alternative was included as required by NEPA regulations and provides a baseline against which other alternatives can be compared.

- 609-6 DOE recognizes DTSC's authority over the cleanup. Chapter 1, Sections 1.3 and 1.4 of the Draft and Final EISs include discussion that acknowledges that cleanup of the site is governed by the 2007 Compliance Order and the 2010 AOC. Section 1.9 identifies additional documents required by regulation or agreement that affect the cleanup of Area IV and the NBZ (e.g., CEQA Program Environmental Impact Report, Soils Remedial Action Implementation Plans, Resource Conservation and Recovery Act). In this Final EIS, DOE revised the text to more clearly indicate that DTSC has approval or other authority that dictates the actions to be taken for cleanup in Area IV and the NBZ.

Commenter No. 610: Sonia Schendel

Ms. Stephe Jennings
NEPA Document Manager
SSFL Area IV EIS
US Department of Energy
4100 Guardian St., Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings,

I am outraged and disappointed in the Draft EIS for SSFL Area IV and the NBZ. DOE's DEIS breaks its legally binding 2010 AOC promise for a full clean up of the site. I am in full favor of the AOC, and its plan to do a full clean up is the only acceptable option. It is not morally sound or even legal for DOE to try and break its commitment of cleaning up all of the contamination. Every one of the clean up options in the DEIS violates the AOC, leaving in place anywhere from 39% to 100% of the contamination, when the AOC bars consideration of any leave in place alternatives. Any failure to do a full clean up, as promised, is unacceptable, posing continued risks to off site communities. Among its various excuses for not doing the cleanup, in all of the DEIS options DOE proposes to not clean up about 300,000 cubic yards of soil that they contaminated by claiming what they purport to be a biological exemption. But they are grossly misrepresenting this biological exemption, which is strictly limited in the AOC. In the 2010 AOC it was stated that the SSFL site must be cleaned up to local background contamination levels. It issued under Section 7(a)(2) of the Endangered Species Act a consultation with the USFWS over biological exemptions with narrow set limits, where in, the exemptions need to be completely unavoidable by any other means. Now years later, the DOE DEIS says on page 18, Chapter 2 of its report that "these areas [of proposed biological exemptions] would be protected under any of the soil remediation alternatives. DOE would not take action in any of these areas unless it is demonstrated that levels of chemical or radioactive constituents in the soil pose a risk to human health or the environment." First, DOE has no right to decide this for themselves, they need the US Fish and Wildlife Service (USFWS) to issue a formal Biological Opinion on what areas should be exempt from remediation. Second, the basis on which a Biological

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610-1 DOE acknowledges your preference for a full cleanup of the site in compliance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Section 2.2 describes how the Cleanup to AOC LUT Values Alternative does incorporate the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values) and acknowledges that the soil remediation action alternatives leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

610-2 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. As noted in Section 2.4, the 2010 Biological Opinion has very limited applicability to the present project. The EPA action that was the subject of the 2010 Biological Opinion involved trimming or mowing of vegetation, leaving the soil seed bank intact and the potential for rapid recovery of the vegetation and habitat by re-sprouting or germination from the soil seed bank. In contrast, the soil remediation addressed in this EIS would require removal of vegetation and soils, including the seed bank, a profound and difficult-to-mitigate impact.

The occurrences of Braunton's milk vetch and Santa Susana tarplant shown in this EIS are based on biological surveys conducted through 2016, thus the results are different than the report produced for EPA.

Commenter No. 610 (cont'd): Sonia Schendel

Opinion is made is on the Endangered Species Act, which is a solely biocentric act; it doesn't have anything to do with human health in these respects (although it has been proven again and again that the current radioactive and chemical levels are in fact a huge risk to human health). Finally, the guidelines laid out under the Endangered Species Act and in the 2010 AOC don't say that DOE is to take 'no action' in these proposed biological exemption areas, it just means that under a USFWS Biological Opinion, if biological resources are identified, mitigation measures are to be taken. As stated in Chapter 2 of the DOE DEIS on page 22, the final exemption areas cannot be officially decided upon until the USFWS has issued a formal Biological Opinion, which they have not. There has been lots of talk and references to consultation with the U.S. Fish and Wildlife Services about forming an official Biological Opinion for SSFL (Appendix E, pp.18, DOE DEIS), but nothing official since the 2010 Biological Opinion over "surveys of SSFL Area IV and the NBZ for radiological contamination. The biological assessment and Biological Opinion identified nine plant species that are listed as endangered or threatened or rare." (Chapter 3 of the DOE DEIS pp.64-65) Of these nine plant species only two are actually found in Area IV and the NBZ. These are; Braunton's milk-vetch which is federally listed as endangered, and the Santa Susana tarplant, which is state listed as rare. This 2010 Biological Opinion for radiological survey sets helpful precedent in terms of the final Biological Opinion for the site. It concluded that for both Braunton's milk-vetch and the Santa Susana Tarplant all that was needed was for each individual to be tagged and avoided before brush clearing and other disturbances. It essentially gave the go ahead to do the survey and did not exempt the areas that were deemed critical or areas that carried either of the plants. In the DOE DEIS they claim that there are seven other (other than Braunton's milk-vetch and the Santa Susana Tarplant) plant species that they try to link to the area in a way that they think allows them to take no action on those areas. Of these seven plants, none of them have actually been observed on the site. They also list an additional five species which are neither federally listed as endangered nor threatened. In terms of animals, there are none that are both federally listed and have been found on the site. Of the seven animals mentioned on the DOE DEIS, five have a 'low' potential of occurrence and two are 'not expected' to occur on the site at all. (DOE DEIS Chapter 3 pp. 63-70) Braunton's

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At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on the exemptions areas in Area IV and the NBZ.

610-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. DOE places a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities. In response to comments, DOE has added a quantitative evaluation of worker, onsite individual, and offsite resident impacts for all alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS.

Commenter No. 610 (cont'd): Sonia Schendel

milk-vetch is a short lived member of the pea family, it adorns purple flowers and has adapted to germinate after disturbances; either mechanical or from fire, this is because the subsequent dormancy lets the seeds live in soil seed banks for long periods. In other words they require a disturbance to fully thrive. “[Braunton’s milk-vetch] is (also) restricted to carbonate or calcareous soils” (“Recovery Plan For Six Plants from the Mountains Surrounding the los Angeles Basin” By US Fish and Wildlife in 1999). In 1987 a recovery plan was created that lays out the steps one would have to take for a recovery of the species. The basics of these steps are to create a reserve of 600 individual plants away from the site and maintain them, then, one could proceed to work on, or in this case clean up, the original site. DOE then goes on to say in Chapter 3 of the DOE DEIS on page 67 that because “the existing recovery plan for Braunton’s milk-vetch (USFWS 1999) does not include the population of the species at SSFL because it was not discovered on site until after the 2005 Topanga fire”, they do not have to follow the guidelines of the recovery plan, despite it being a perfectly viable option. There is a federally listed critical habitat for Braunton’s milk-vetch in the bottom left corner of Area IV, but again, the fact that there are endangered or rare species on the site does not mean that they have to leave the land completely alone and cannot clean it up at all, like they suggest, rather they are allotted a certain amount of ‘take’. Once species are identified they simply have to be more careful to make sure that what they are doing is in line with the USFWS Biological Opinion (which still does not exist) and the listed recovery plans. The Santa Susana Tarplant, a subshrub from the sunflower family, is not not federally listed, while it is state listed as rare in the California Endangered Species Act under the section of the ‘Native Plant Protection Act’. This Act follows similar rules to that of the Endangered Species Act, albeit much weaker than its federal counterpart. This is because the California Act was made in parallel to the federal Act. The broad outline of the California Act is that it prohibits the ‘take’ or harm of state listed endangered or rare species, but gives many take exemptions, as does the federal Endangered Species Act (CA FISH & G § 1904 - § 1907). According to the DOE, there are roughly 850 individuals of the Tarplant recorded in Area IV, which is 290 acres. (DOE DEIS Chapter 3. pp. 67 and Attachment A pp.5) However, when comparing the map from DOE’s DEIS in Chapter 3 pp. 66, and the map from the

**610-2
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Commenter No. 610 (cont'd): Sonia Schendel

Quarterly Biological Monitoring Report #3, which was prepared for the EPA (report done by HydroGeoLogic Inc and Envicom Corporation), there are major discrepancies in the information provided. On the map produced by the DOE DEIS they are claiming many more occurrences of both Braunton's milk-vetch and the Santa Susana Tarplant than in the report produced for the EPA. DOE is trying to use the claim of conservation of natural resources as an excuse to break its obligations to clean up the toxic damage it did to those same resources. They are claiming to want to protect the environment and species by not cleaning up the contamination, when really all they are doing is hurting the ecosystem as a whole by proposing to leave these deadly chemicals and radiation in place. If they were concerned about the environment, they wouldn't have polluted it in the first place, and they wouldn't now be trying so hard to leave the contamination in place and cause more damage. Breaking the legally binding cleanup obligations set by the AOC would be an outrage, in terms of environmental wellbeing, species wellbeing, and the wellbeing of total human health.

610-2
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cont'd

Thank you,
Sonia Schendel

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Commenter No. 611: Claude Klein

Sent: Wednesday, April 12, 2017 10:27 AM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

Dear Ms. Jennings:

My daughter, son-in-law and three little grandchildren live in a community near to the SSFL.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will be at increased risk of cancer and illnesses related to exposure to SSFL contaminants. I respectfully request that you help protect the health of my family and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

Thank you!

Sincerely,

Claude Klein

611-1

611-1

DOE acknowledges your concern about cleanup of all contamination in compliance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.7, "Offsite Impacts," of this CRD and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of offsite contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 612: Linda Brown and Alberto Calero

Sent: Sunday, March 05, 2017 12:35 AM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy
NEPA Document Manager
SSFL Area IV EIS

Dear Ms. Jennings

I WOULD LOVE TO JOIN YOU IN THE NAME OF MY OLDEST SON WHO DIED ON MARCH 8th OF LEUCEMIA OR LEUCHEMYA IN 2005 WE USED TO LIVE BY THE TEXAS TRACK IN SIMI AND HE ATTENDED HILLSIDE JR SCHOOL AND STA SUSANA HS, IN CITY OF HOPE THE ONCOLOGIST IN 2002 ASKED US :WHAT WAS WRONG WITH SIMI VALLEY?...THEN MY SON AND I LOOKED AT EACH OTHER AND ASKED THE DOCTOR WHY? AND HE RESPONDED TO US THAT MOST OF THE PATIENTS ARE FROM SIMI! WE WERE NOT SURPRISED REALLY BECAUSE WE HEARD HISTORIES OF RESIDENTS THERE OF SEEING ANIMALS WITH TWO HEADS AND WEIRD STUFF PLUS PEOPLE WITH CANCER...I AM REALLY UPSET TO LEARN OF YOUR CHILD BATTLING THIS AWFUL DESEACE.. ME...MYSELF SINCE I MOVED TO SIMI I STARTED DEVELOPING ASTHMA AND WENT TO THE ER SEVERAL TIMES I THOUGHT THIS IS OVER BUT YOU CAN COUNT ON ME TO MAKE HUGE CHANGES NOW AND FOREVER I WILL SEE YOU ON MARCH 8th WICH IS MY SON'S ANNIVERSARY

Sincerely,

Linda Brown and Alberto Calero

612-1

612-1

DOE acknowledges your comment and refers you Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 613: Joey Carnes

Sent: Wednesday, February 22, 2017 12:48 AM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

Dear Ms. Jennings:

I grew up down the mountain from SSFL, in Agoura. We had a natural stream that ran through our neighborhood. We'd play in in on the way home from school. No one cared about this then, but, it originated from the top of the mountainside, downstream from SSFL. Fast forward three decades . . . almost every classmate I have from my neighborhood is either affected with thyroid affliction, cancer, or has had a family member with cancer. My friend on the street behind me has inoperable brain tumors. My friend from two streets up lost her father to cancer, and her sister had a tumor behind her eye. My friend from two streets down has widespread growth on his thyroid, and his mama is deceased from cancer. My sister and I both are dealing with thyroid cancer, which is NOT genetic . . . my sister's more serious and rare. My friend from 3 streets up has a very severe Hashimoto's, as does her father . . . ALSO not genetic. My friend from 4 streets up has Grave's. She had to kill her thyroid with radiation. My troop leader from Oak Park (along the same stream) is dead from cancer. My grad school classmate, who lived up that hill is Oak Park is dead from cancer. The list goes on and on. It is frightening!

613-1

613-1

DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 613 (cont'd): Joey Carnes

We have a pretty good idea of what might have caused it because the very chemicals that were leaked up in SSFL are known to cause thyroid disruption and our types of cancer.

613-1
cont'd

It is time to clean that mess up. Completely! Enough of us have suffered, already, and our kids don't deserve to suffer, too.

613-2

Please advocate for this site to be cleaned up fully! Our kids DRINK groundwater near this site. We need to do the right thing now.

Thank you so much for reading my plea. Please help our community.

Sincerely,

Joanna Carnes, MFT, LPCC

613-2 DOE acknowledges your preference for complete cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to your concern about groundwater near the site, please refer to Section 2.7, "Offsite Impacts," and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for additional information. As discussed in these sections, Area IV is not currently spreading contamination to offsite areas, including offsite groundwater. Also, refer to Chapter 2, Figure 2-11 of this Final EIS. This figure shows that the groundwater plumes for which DOE is responsible do not exceed drinking water maximum contaminant levels outside Area IV and the NBZ.

Commenter No. 614: Jessica Petritz

Sent: Wednesday, February 22, 2017 2:21 AM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

Dear Ms. Jennings:

For the sake of the people, please do what's rights. My dad worked there and died of cancer at 55. A cruel reality for a 22 year old girl who loved him with her whole entire heart.

I now have children of my own, raising them here, and am terrified about these "leftovers". Please, please, please...make the RIGHT choice to clean this up.

Sincerely,

Jessica Petritz

|| 614-1

|| 614-2

|| 614-1
cont'd

614-1 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

614-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. See also Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for an up-to-date description of the current condition of Area IV.

Commenter No. 615: Paige Moser

Sent: Tuesday, February 14, 2017 11:47 AM

To: Jennings, Stephanie

Subject: DOE Must Uphold AOC for SSFL - Comment on DEIS

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

Dear Ms. Jennings:

I live in the Susana Knolls, a community of approximately 500 homes located directly beneath the contaminated Santa Susana Field Laboratory (SSFL).

I am frustrated and exasperated by the Department of Energy's Draft Environmental Impact Statement (DEIS) for the SSFL cleanup. Every single one of the proposed cleanup alternatives violates the 2010 Administrative Order on Consent to clean up all detectable contamination. All three options are unacceptable. Leaving over 90%?? 80%?? Even over 30%??? Is this a joke?

And the idea that the DOE claims it does not get to decide how much contamination gets cleaned up is absurd on its face. The AOC makes it perfectly clear that the DOE is a regulated entity, with the Department of Toxic Substances Control (DTSC) having oversight. DTSC determines the cleanup, not DOE.

I can't believe that after 26 years of living in the Knolls that this is still being reworked, especially since it is being reworked in favor of allowing high degrees of contamination. The original agreement is what needs to be followed. None of the other three options is acceptable.

Sincerely,
Paige Moser

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cont'd

- 615-1 DOE acknowledges your preference for cleanup in accordance with the 2010 AOC and refers you to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. This section discusses the alternative that incorporates the technical elements of the 2010 AOC, as well as the soil volumes that would be left on site under each alternative. None of the action alternatives leaves concentrations of chemicals or radionuclides that are dangerous for the intended use of the site as open space. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.
- 615-2 DOE recognizes DTSC's authority over the cleanup. Chapter 1, Sections 1.3 and 1.4 of the Draft and Final EISs include discussion that acknowledges that cleanup of the site is governed by the 2007 Compliance Order and the 2010 AOC. Section 1.9 identifies additional documents required by regulation or agreement that affect the cleanup of Area IV and the NBZ (e.g., CEQA Program Environmental Impact Report, Soils Remedial Action Implementation Plan, Resource Conservation and Recovery Act). In this Final EIS, DOE revised the text to more clearly indicate that DTSC has approval or other authority that dictates the actions to be taken for cleanup in Area IV and the NBZ.

Commenter No. 616: Marvin Smith

Sent: Tuesday, February 14, 2017 9:16 PM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

DOE allowed Rocketdyne to test in a residential area. I am outraged you want to walk away from your folly . Clean it up now!

Sincerely,

Marvin Smith

|| **616-1**
|| **616-2**

- 616-1** Neither DOE nor its predecessor agency, the Atomic Energy Commission (AEC), was ever in a position of authority over Rocketdyne. DOE (or AEC) and Rocketdyne operated independently at SSFL. As described in Chapter 1, Section 1.3, of this EIS, Rockwell International's Rocketdyne Division began rocket engine testing in the Area I portion of SSFL in 1947, and in the mid-1950, the AEC funded nuclear research on a 90-acre parcel of land in what is now Area IV. Additional information can be found at DOE's Energy Technology Engineering Center website (see <http://www.etec.energy.gov/>).
- 616-2** DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Commenter No. 617: L. Lewis

Sent: Sunday, February 12, 2017 1:56 AM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

Dear Ms. Jennings:

The DOE, Rockwell /Rocketdyne, etc. left an untold amount of dangerous contaminants behind.

THEY NEED TO CLEAN UP ALL OF IT.

NOW!

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation, all of which are prohibited under the AOC.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will be at increased risk of cancer and illnesses related to exposure to SSFL contaminants. I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

Sincerely,

L. Lewis

617-1

617-2

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cont'd

617-1 DOE acknowledges your preference for a full cleanup of the site in compliance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. In addition to a No Action Alternative (required by NEPA regulations), this EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS, which summarizes the public health studies that have been performed for the SSFL vicinity, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

617-2 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup" of this CRD regarding your concern about cleanup per the 2010 AOC, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have

Commenter No. 617 (cont'd): L. Lewis

examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completion of cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in cleanup of Area IV and the NBZ that would be protective of the public health and safety and the environment.

Commenter No. 618: Taryn Thompson

Sent: Friday, February 10, 2017 10:00 PM

To: Jennings, Stephanie

Subject: DOE Must Uphold AOC for SSFL - Comment on DEIS

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

I live in Simi Valley near the Knolls community. It is unconscionable not to do a full clean up of the SSFL when people's health and lives are at stake. Anything less than a safe and thorough clean up of this area is unacceptable.

Sincerely,

Taryn Thompson

618-1

618-1

DOE acknowledges your concern about a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Also refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of impacts to those in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Commenter No. 619: Timothy Wawrzeniak

Sent: Friday, February 10, 2017 9:30 PM

To: Jennings, Stephanie

Subject: Comment on DOE's Draft EIS for SSFL

U.S. Department of Energy NEPA Document Manager, SSFL Area IV
EIS Stephanie Jennings

Dear Ms. Jennings:

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation, all of which are prohibited under the AOC. Any "leave in place" cleanup methods, including natural attenuation and "no action" and should not be considered. AOC is a legally binding agreement with the DTSC, and DTSC as the regulator makes the cleanup decisions, not DOE.

The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the state toxics agency is the regulator who decides cleanup requirements for the toxic chemicals. That isn't within the power of the polluter, DOE. DOE should withdraw the EIS, as it violates cleanup commitments and DOE has no legal authority to decide the cleanup in the first place.

I demand that you protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully complies with the AOC provisions and clean up ALL of the contamination.

Sincerely,

Timothy Wawrzeniak

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cont'd

619-1 DOE acknowledges your preference for cleanup of all contamination in compliance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. In addition to a No Action Alternative (required by NEPA regulations), this EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD), as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to your comment about natural attenuation, as discussed in Section 2.2, onsite treatment is provided for in the 2010 AOC. DOE notes that the 620,000 cubic yards of soil for which monitored natural attenuation is proposed contain very low concentrations of hydrocarbons (TPH) that do not pose a threat to human health.

619-2 . NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record(s) of Decision (ROD[s]) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ.

Commenter No. 619 (cont'd): Timothy Wawrzeniak

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Commenter No. 620: Henning Cohrt

To: Stephanie Jennings

Subject: Comment on DOE's Draft BS for SSFL Cleanup

Date: Tuesday, April, 2017 5:00:37 PM

U.S. Department of Energy NEPA Document Manager, SSFL Area IV EIS

Stephanie Jennings

Regardless of whether a causal link between the contamination of the SSFL and various cancers in the surrounding areas can be proven, the fact that such severe contamination exists in close proximity to large residential areas shall be reason enough for the DOE to ensure a thorough cleanup.

The inactivity of the DOE and others with respect to addressing this issue will only make the problem worse, and a future solution more difficult.

Therefore, neither of the alternatives proposed in the Draft EIS are acceptable.

The DOE has the moral obligation to stand by its commitment made in 2010, at a minimum.

We are the tax payers, and we demand that the taxes we pay are used to protect us from avoidable threats to our health and life.

Sincerely,

Henning Cohrt

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620-3

620-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup" of this CRD regarding your concern about a thorough cleanup of SSFL and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Note that there is not severe contamination in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

620-2 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. In addition to a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Therefore, DOE has included alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-

Commenter No. 620 (cont'd): Henning Cohrt

regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

620-3 Thank you for your comment. DOE's activities are approved and funded by congress as part of the Federal government budgeting process.

Commenter No. 621: Michael Collins
EnviroReporter.com

04/10/2017	Michael Collins	EnviroReporter.com	<p>All of the attached EnviroReporter.com comments, articles, photographs, figures and reports are submitted for the Department of Energy Administrative Record on the SSFL Area IV EIS. These comments and their source materials are organized in such a way as to make them cohesive and understandable.</p> <p>The individual materials which make up EnviroReporter.com's comments are in PDF form and ordered sequentially. They will be submitted individually and in order.</p> <p>Thank you for the opportunity to comment. Our goal is to provide you with all the information we have uncovered during a 13-year investigation which resulted in the April 6, 2017 EnviroReporter.com publication of the article "Brandeis-Bardin's Toxic Denial" based on the also-published "Brandeis-Bardin's Toxic Denial INVESTIGATION."</p>
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621-1

621-1

All of your comments have been included in the CRD and are included in the EIS Administrative Record. All comments from stakeholders were reviewed by DOE, and if warranted, changes were made to this Final EIS.

621-1
cont'd

Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

4/10/2017 Brandeis-Bardin's Toxic Denial - EnviroReporter.com

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Brandeis-Bardin's Toxic Denial

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Jewish camp below Santa Susana Field Lab, aided by troubled state toxics agency, denies toxins have migrated to its property despite decades of evidence; new Dept. of Energy report proposes not cleaning up most contamination


2007 Brandeis-Bardin photo - photo by William Pearson Dowling

- * Over 600 acres of Rocketdyne drain into Brandeis-Bardin and adjacent Runkle Canyon
- * 1993, 1995 Rocketdyne reports show 19 elevated Strontium-90 soil sample readings
- * Plutonium-239/240, Uranium-238 found in 2004 soil higher than later SSFL readings
- * Elevated Strontium-90, beta radiation in 2005 water flowing into Brandeis-Bardin

* 2012 EPA soil and Boeing groundwater Area IV reports consistent with earlier results
 * June 2015 Boeing report admits then denies Brandeis-Bardin seeps impacted by SSFL chemicals
 * 2015 DOE finds radi identified as "fission products" and "used in reactor control rods"
 * Nov. 2016 NASA report shows Brandeis-Bardin groundwater/wells chemical contamination
 * Dec. 2016 DOE report given by camp owner American Jewish University (AJU) to Jewish Journal shows elevated Brandeis-Bardin soil toxins
 * Brandeis-Bardin reports released by AJU show perchlorate in fruits and vegetables
 * AJU denies all contamination in 2015, 2016, March 2017
 * Dec. 2016 DTSC letter claims no SSFL radi migrated north, DTSC maps show otherwise
 * Jan. 2017 DOE issues Draft Environmental Impact Statement (DEIS) proposing little cleanup
 * Ventura County Board of Supervisors, Los Angeles County Board of Supervisors, Los Angeles City Council pass resolutions critical of DOE's DEIS


A 13-year-long investigation of the Brandeis-Bardin Institute has revealed extensive radiation and chemical impacts across the 2,878 acre property in eastern Simi Valley, California. Multiple government and media tests and reports from 1993 through 2016 indicate that the site may have been contaminated by the bordering Santa Susana Field Laboratory (SSFL), commonly known as Rocketdyne.

NEW INVESTIGATION



Brandeis-Bardin's Toxic Denial INVESTIGATION

RADIATION STATION GLENDALE



HOT NEWS

http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/1/ 1/40

621-2

621-3

621-2
cont'd621-3
cont'd

621-2 DOE disagrees with the depiction of its actions and intent as presented in this comment. Consistent with DOE's Environmental Management mission of completing the safe cleanup of the environmental legacy of nuclear energy research, DOE remains committed to remediating those areas of SSFL for which it is responsible, Area IV and the NBZ. As new data became available, DOE has considered those data and adjusted its thinking and evaluations accordingly. For example, DOE's understanding regarding the implementability of a cleanup in accordance with the 2010 AOC has evolved since the agreement was signed. As discussed in Chapter 2, Section 2.3.3.1, of this EIS DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under NEPA, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the health and safety of the public and the environment. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this EIS.

Refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD. This section acknowledges that the soil remediation action alternatives leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Refer also to Section 2.7, "Offsite Impacts," of this CRD and the referenced DTSC memorandum, *Review of Radiological and Chemical Data from Investigations Conducted at and near the Santa Susana Field Laboratory and the American Jewish University – Brandeis Bardin Campus*. Among the memorandum's conclusions is that, "levels of chemicals and radionuclides at Brandeis Bardin Campus are safe for human health, as determined using risk based screening levels derived using State and Federal standards and guidelines."

The comment misinterprets the meaning of the negative incremental risks presented in the Draft EIS. As explained in Chapter 4, Section 4.9.2, of the Draft, the negative results indicate that the concentrations from site-related activities are less than the variability in the background concentrations of those chemicals and radionuclides. In other words, the concentrations are so close to background that it is difficult to distinguish them from background. Key contributors to this for radioactive constituents

Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

4/10/2017

Brandeis-Bardin's Toxic Denial – EnviroReporter.com

The Brandeis Camp Institute began in 1947 on 2,200 acres in eastern Simi Valley and by 1953 Camp Alonim ("oak trees" in Hebrew) was established. The camp soon became a new paradigm in Jewish adult and youth retreats for "a non-denominational, Jewish experience brought to life through sports, the arts, nature, and learning in a safe and embracing community," according to its [website](#). In 2007, the 250-student Bel-Air based University of Judaism merged with the institute resulting in the American Jewish University (AJU) and its Brandeis-Bardin Campus.

Decades' worth of tests and analysis done by multiple government agencies, [EnviroReporter.com](#) and Brandeis-Bardin itself show what could reasonably be expected in a place downhill from one of the most radioactive and chemically contaminated sites in California. Brandeis-Bardin successfully sued Rocketdyne in the 1990s over contamination of its land, but now aggressively maintains that the lab, which has yet to begin an extensive cleanup, has not fouled its property.



266 acres were surveyed in nuclear Area IV for radiation and chemicals

Recent media coverage of Brandeis-Bardin's radiation and chemical issues, greeted with a howl of indignation by camp owner American Jewish University (AJU), has set the stage for this expose which fully documents contamination findings and impediments to full cleanup.

"Sludge from Rocketdyne"

Lab tested soil and water samples from Brandeis-Bardin show that elevated levels of radiation. Plutonium-239 (Pu-239/240) and Uranium-238 (U-238) were found in the Jewish camp at levels even higher than they are at SSFL's Area IV, according to soil tests from 2004 and water readings from 2005 that have been authenticated and verified by [EnviroReporter.com](#).

Area IV is the 280 acre nuclear research part of SSFL, much of it draining into Brandeis-Bardin. Operated for decades by the Atomic Energy Commission and then the Department of Energy (DOE), and owned by Boeing, it is the site of three partial nuclear meltdowns including the Sodium Reactor Experiment in 1959. Area IV is grossly polluted by radiation and chemicals.



2004 bubbling muck in Brandeis-Bardin

Gross beta radiation was double background in both the sampled Brandeis-Bardin dirt and water. Strontium-90 (Sr-90) and tritium (H-3) were also found at levels over twice their background, or normal levels of radiation. Photographs and video obtained and authenticated by [EnviroReporter.com](#) show the bubbling muck leaking from the same pipe each year from 2004 to 2007 and again in 2014 suggesting continuous release.

Tests were conducted for soil on December 30, 2004 and for water on November 23, 2005 from mud and a bubbling, chemical sheen-topped liquid at the [bottom of a ravine in the upper reaches of Meier Canyon](#) at the camp. Samples were subsequently sent for radiochemical analysis to STL Richland, a prominent Richland, Washington-based laboratory.

The 2004 STL Richland soil test results had to wait eight years before they could be compared to a reliable standard. The dirt's radionuclides were then compared to "Background Threshold Values" (BTVs) developed for Area IV by the U.S. Environmental Protection Agency (EPA) in 2012. The government's tests cost taxpayers \$41.5 million and found high radiation as reported in [Radiation Readings Soar at Rocketdyne](#).

The 2005 STL Richland water test readings were compared to the local and national averages. Both the soil and the water came from the same spot sitting over a thousand feet down a steep poison

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/>

April 9, 2017 [Pacific Ocean in Malibu normal background radiation](#)

April 8, 2017 [Los Angeles rain normal background radiation](#)

April 6, 2017 [Brandeis-Bardin's legal challenges in stark detail](#)

April 1, 2017 [115% rad spike in Australia after remnants of ex-Cyclone Debbie](#)

March 28, 2017 [Japan recycling hot Fukushima dirt for parks & green spaces under a layer of clean earth or concrete](#)

March 23, 2017 ['Criminal madness' to incinerate Fukushima radioactive waste which will disperse it more](#)

March 17, 2017 [Southwest Michigan sleet 37.5% above background radiation](#)

March 17, 2017 [Japan court says government & TEPCO liable for Fukushima in legal first](#)

March 11, 2017 [Millions of cubic meters of hot Fukushima soil with nowhere to go six years on](#)

March 2, 2017 [Highest February radiation in Caloundra Australia since Fukushima began March 2011](#)

February 25, 2017 [Pacific Ocean devastation censored at university in reaction to Fukushima says scientist](#)

February 25, 2017 [Radioactive boars found in Czech forests 31 years after Chernobyl meltdown disaster](#)

December 7, 2016 [MORE contamination found in Boeing/SSFL Southern Buffer Zone used to lure hikers and birders to greenwash Rocketdyne](#)

May 18, 2016 [EnviroReporter.com DECADE 2006-2016](#)

KB Home's Runkle Canyon development called [Arroyo Vista at the Woodlands](#)

[8,383 EnviroReporter.com rad reports](#) March 11, 2011 to March 11, 2016 and counting

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621-3 cont'd

621-4

621-3 cont'd

621-4 cont'd

621-3 cont'd

are the naturally occurring radionuclides uranium and thorium. The analysis compensated for their presence by analyzing impacts with and without the uranium and thorium included. In this Final EIS, the analysis was updated and is presented in Chapter 4, Section 4.9.2.

621-3 Please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

The scope of this EIS is limited to cleanup of DOE's portions of SSFL for which it is responsible, Area IV and the NBZ. DOE was not involved in rocket engine testing; contamination resulting from the testing is being addressed by NASA and Boeing. DOE's groundwater contamination remains within the boundaries of Area IV and the NBZ. Boeing and NASA cleanup activities are only considered as part of cumulative impacts (Chapter 5). Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities, is being evaluated in the DTSC Program environmental impact report (EIR) for the SSFL, Ventura County, California (Draft EIR); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]).

621-4 As indicated in Chapter 1 of this EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater. Chapter 1, Section 1.3, contains a brief history of activities at SSFL and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV at SSFL can be found at <http://www.etc.energy.gov/>. Chapter 3, Sections 3.9.5 and 3.9.6, of this EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measurable release of radioactive material. These sections also include information about health studies performed by independent organizations such as the Agency for Toxic Substances and Disease Registry (ATSDR),

Section 3 – Public Comments and DOE Responses

3-1273

Commenter No. 621 (cont'd): Michael Collins EnviroReporter.com

4/10/2017

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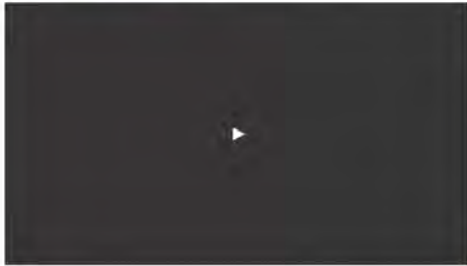
oak-choked canyon leading down from Area IV, it's referred to in one Brandeis-Bardin report as "Carpenter Area 1" suggesting people stayed at the site.

Area IV's former Sodium Disposal Facility (FSD) drains down Channel D into Meier Canyon where the toxins were detected. The FSD was used to dispose of barrels of radioactive sodium. Sodium reacts violently with air or water so workers would take lots on who would get to shoot the barrels with a rifle to make them explode outdoors. Debris was blown in all directions including down into Brandeis-Bardin according to an eyewitness account from a former Rocketdyne security guard recently recalled to EnviroReporter.com.



2009 Brandeis-Bardin water sampling

Gurgling goo was still flowing unimpeded in the exact same Meier Canyon location in 2014 when Simi Valley resident Brandon Manwell contacted EnviroReporter.com. Manwell had found the place hiking with friends. He videotaped and photographed it in April 2014 and the result is a YouTube video entitled [Sludge from Rocketdyne](#). The skateboarder first thought he was in the upper reaches of [Bunkie Canyon](#), one mountain ridge away to the west, where KB Home's controversial development called [Arroyo Vista at the Woodlands](#) is being built.



"Me and my friend found a few places just like this back in that canyon," Manwell wrote in an April 19, 2014 email to EnviroReporter.com. "We wouldn't have thought too much of it except for the fact that the water running out of this old pipe was iridescent, kind of like when water has oil in it, but it had a weird consistency when we touched it with a stick in the video. We weren't sure what to make of it to be honest, we thought we should go back and get samples."

The 2004 and 2005 STL Richland radiological testing isn't the only data available showing Brandeis-Bardin pollution detections. A DOE map showing chemical contamination reaching far into Brandeis-Bardin that is marked for possible remediation was shown at a public meeting April 22, 2014. That map listed offending chemicals on Brandeis-Bardin property which included dioxins, poly aromatic hydrocarbons (PAHs), phthalates and pesticides.

A 2015 Department of Toxic Substances Control (DTSC) version of the map shows that even more of Brandeis-Bardin is potentially contaminated. It was made public April 28, 2015 by DTSC, California's lead government agency on the cleanup of SSFL.



At the same meeting, DTSC officials straight-faced told the audience that SSFL pollutants were staying onsite, above and below ground. But the department later

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/>

3/40

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RECENT COMMENTS

Kendrick Ng on Brandeis-Bardin's Toxic Denial

Dale on Brandeis-Bardin's Toxic Denial

Another Simi Mom on Brandeis-Bardin's Toxic Denial

Chase on Radiation Conversation II

vital on Radiation Conversation II

vital on Radiation Food Lab

manny on High radiation detected in L.A. rain

vital on Radiation Food Lab

vital on Radiation Conversation II

vital on Radiation Food Lab



SPECIAL INVESTIGATIONS



621-3
cont'd

621-5

and the conclusions from those studies. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem, less than one-third of the original estimate. This dose would result in a corresponding risk of fatal cancer of less than a third of that original estimate.

Because of public concern about the accident, DOE hosted an informational workshop on August 29, 2009, with testimony from 3 independent experts (see http://www.etc.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the two experts was skeptical of the estimates of large health affects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE and others, including EPA, have conducted extensive studies to map the remaining chemicals and radioactivity. From these studies, it is known that chemical contamination at Area IV is more widespread than radiological contamination, and that contaminants are concentrated near certain

Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

4/10/2017

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made public more information that confirms what the DOE and DTSC maps had already shown, this time with diagrams carefully plotting toxic trouble spots in the upper reaches of Brandeis-Bardin.

2015 DTSC map showing contaminants in Brandeis-Bardin drainage

DTSC sent to EnviroReporter.com December 3, 2015 a [Boeing report including maps of Brandeis-Bardin contamination](#) (pp. 55-57/138 PDF pages; 10.89 MB) down what is called "Channel D." This 2008 report explains that Boeing owns Area IV and the Northern Buffer Zone (NBZ), land transferred to Boeing in 1997 as part of the confidential settlement with Brandeis-Bardin over the camp's land allegedly being contaminated.

The maps show at least eight chemically-impacted places in Channel D on Brandeis-Bardin property that would be cleaned up applying the standard that the DOE and NASA have committed to with DTSC in 2010, normal background. Boeing's report suggests that's unreasonable and recommends a drastically smaller cleanup, which is shown on its own map as removing from remediation the eight chemical hot spots in Channel D on Brandeis-Bardin's property.



2016 DTSC Strontium-90 map using risk levels provided by Boeing instead of required background to declare Brandeis-Bardin clean

At an April 12, 2016 meeting, DTSC produced a [presentation](#) (pp. 28-30 PDF pages; 6.4 MB) stating that Brandeis-Bardin is safe. The presentation included maps showing both Sr-90 and Cesium-137 (Cs-137) migrating offsite into Brandeis, but declared the contamination posed no threat according to what it claimed was a residential Risk-Based Screening Level (RBSL.) Problem was that the standard of 3.85 picocuries per gram (pCi/g) for Sr-90 that it used, apparently provided to DTSC by Boeing, was hundreds of times less protective than the current EPA Residential Preliminary Remediation Goal of 0.00121 pCi/g. DTSC falsely declared almost all of the

Strontium-90 in Area IV to be to be less than a residential risk-based standard, when in fact they are almost all above it. DTSC also should not have applied any risk based standards to Area IV, since it is under the Administrative Order on Consent (AOC) to be cleaned up to background. (DTSC signed identical AOCs with the DOE and NASA in 2010 agreeing to remediate their areas of SSFL to background levels of radiation and chemicals under state authority.)

The maps strikingly, visually, and directly contradict recent statements by both AJU and DTSC. AJU has [linked](#) to just [one page](#) of that April 2016 presentation on its website, neglecting to include the maps that were in the very subsequent pages. Not to be outdone, in a [December 22, 2016 letter](#) to California Assemblymember Matt Dababneh, DTSC claimed that, "there was no migration of radiological contamination north of SSFL." This "nothing to see here, keep moving along" approach flies in the face of hard data, reports produced by DTSC itself, and established EPA regulations.

An [EnviroReporter.com analysis](#) of a huge June 30, 2015 Boeing report on seeps on SSFL and its surroundings, reveals 338 detections of toxic chemicals in Brandeis-Bardin water. Chemicals found included those the study termed "common laboratory contaminants[is]": Trichloroethylene, perchlorate, acetone, cis-1,2-DOE and carbon disulfide are a few of the toxins found in years of testing the Jewish camp's upper reaches which drain into the center of the property and beyond.

A November 2016 NASA groundwater report obtained by EnviroReporter.com also shows chemical contamination in a Brandeis-Bardin artesian well discharging water down a canyon, with toxic levels detected that exceed California Maximum Contamination Levels (MCLs) for drinking water. All water courses draining through Brandeis-Bardin, perennial and non-perennial, are considered "blue line streams" protected by the Clean Water Act. The MCL coverages in Brandeis-Bardin should, normally, be reported to the Los Angeles Regional Water Quality Control Board (LARWQCB). EnviroReporter.com has found no evidence that any such notification about Brandeis-Bardin's MCL exceedance were ever reported to the board.

621-5
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Fukushima - The Perfect Crime?
March 11, 2014



China Syndrome Town
March 6, 2018



Black Swan SONGS
October 14, 2015



Boeing's Meltdown Makeover
November 10, 2017

621-3
cont'd



621-6

621-3
cont'd

facilities, rather than being evenly distributed across the site. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in accordance with all regulatory requirements. Therefore, SSFL Area IV and the NBZ are not "massively contaminated". Please refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for further discussion of past cleanup and the current status of Area IV.

The American Jewish University, Brandeis-Bardin Campus is located directly north of SSFL. The environmental monitoring program for Area IV is extensive and addresses the potential for the spread of contamination from Area IV to offsite areas, including that of the Brandeis-Bardin Campus. The results of this monitoring program are provided in annual environmental monitoring reports (see http://www.etc.energy.gov/Environmental_and_Health/ASER.html). Information about this monitoring program can be found at the Energy Technology Engineering Center website (<http://etc.energy.gov>). Studies, including those issued in 1992, 1994, and 1995, have addressed whether radiological and chemical contaminants were present on the properties north of SSFL (see http://www.etc.energy.gov/Environmental_and_Health/Brandeis_Bardin.html). These studies led to cleanup activities on part of the American Jewish University property, as well as Boeing purchases of the areas of the property with the highest levels of contamination. These areas were incorporated into the SSFL site as the NBZ (DTSC 2017a). In May 2017, DTSC published its review of chemical and radiological data from the investigations that had been performed to date. From its review, DTSC concluded that: (1) levels of radionuclides on the Brandeis-Bardin Campus appear to be within the natural background range; (2) levels of chemicals and radionuclides at the Brandeis Bardin Campus do not pose a threat to human health; (3) contamination at SSFL does not pose a threat to Brandeis Bardin Campus users; and (4) the Brandeis Bardin Campus is safe for use by campers, visitors, students, faculty, administrators, and staff (DTSC 2017a). Please refer to Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

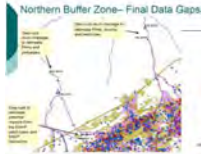
Commenter No. 621 (cont'd): Michael Collins

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4/10/2017

Brandeis-Bardin's Toxic Denial – EnviroReporter.com

A DOE soil testing report published by the *Jewish Journal* December 7, 2016 shows high chemicals in Brandeis-Bardin dirt in drainages off of Area IV. AJU had sent the test results to the non-profit weekly newspaper after the publication inquired about the readings. "The sources of the chemicals are not known," the paper said. "Some may date to early agricultural operations on the land, which later housed the laboratory, the DOE information indicates."



EnviroReporter.com has also uncovered additional evidence of SSFL toxins impacting the Jewish camp including 1993 and 1995 Rocketdyne reports showing Sr-90 over background in 19 separate soil samples. Cesium-137 was found in a NASA drainage into the camp and radioactive cow flops in Area IV were so hot that they threatened to re-contaminate the FSDF after one of its remediations. Camp videos feature revelers playing traditional Jewish instruments dancing near the potentially hot heifers.

2014 DOE map shows pink "Preliminary Remediation Areas" stretching into Brandeis-Bardin

None of this should be unexpected. Brandeis-Bardin borders and is in the drainage of the former Sodium Reactor Experiment (SRE) which partially melted down and released hundreds of times more radiation outdoors than did Three Mile Island in 1979 from the unfortified building. The SRE site and its surroundings still have massively contaminated areas with radiation at thousands of times background.

Radiation in the Dirt

When first found in 2004 at the bottom of a ravine under Area IV, the suspect substance looked as if it had been coming out of the pipe and ground for years. Based on eyewitness observations, photographs, videotape, and Rocketdyne and Boeing reports, EnviroReporter.com estimates that the liquid leaking into Meier Canyon Creek and flowing through Brandeis-Bardin has likely been in existence for decades.

The sampling site sits about 1,200 feet downhill of the Radioactive Materials Handling Facility (RMHF), the former SNAP experimental space nuclear reactors and the FSDF. Small space reactors partially melted down in Area IV in 1964 and 1969 releasing radiation into the environment.

The entire 2,850-acre mountaintop lab drains 612 of its chemically and radioactively impacted acres into Brandeis-Bardin. The AJU property is the largest Jewish-owned institutionally owned property outside of Israel. Ironically, it borders the lab which was started to test V-2 rockets under the guidance of the former Waffen SS-Sturmbannführer (Major) and rocketeer, Wernher von Braun.



The flowing Brandeis-Bardin water seems to be connected to an artesian groundwater well or pipe running down the ravine from Area IV above, or both. The water makes it way past signs stating, "WARNING – DO NOT DRINK OR USE THIS WATER" and "NO HIKING BEYOND THIS POINT" into Meier Canyon Creek which flows intermittently through Brandeis-Bardin in rainy seasons or during significant precipitation events.

2004 Brandeis-Bardin oak with warning signs

Pu-239/240 was found considerably higher in the Brandeis-Bardin dirt tested than the highest sample analyzed in the EPA's 2011 radiation soil testing report

in Area IV. A potent radionuclide with a half-life of 24,110 years, Pu-239/240 was collected and tested in a 2004 Brandeis-Bardin soils report [17 PDF pages; 805 KB] completed in 2005 by STL Richland. Both soil samples had higher Pu-239/240 than found in Area IV soils.

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621-5 Please see the response to comment 621-3.

621-6 Please see the response to comment 621-3. It should be noted that the term "common laboratory contaminant" refers to the analytical laboratory performing the sample analysis and not the SSFL. Common laboratory contaminants, such as acetone and methylene chloride, introduced into a sample during sample analysis may result in false positive results.

621-7 There are no pipes leading from SSFL Area IV onto the Brandeis-Barden property.

Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

4/10/2017

Brandeis-Bardin's Toxic Denial – EnviroReporter.com

The peak 2004 Pu-239/240 sample exceeded its BTV by 55.2 percent. This extremely toxic, cancer-causing radioisotope produced during a nuclear reaction was precisely 21.6 percent higher than the "Maximum Value Detected" (MDV) for the radionuclide found in Area IV in the EPA's October 2011 [Final Radiological Background Study Report – SSFL](#) (PDF page 282/286; 16.5 MB).

Read more at [BRANDEIS-BARDIN'S TOXIC DENIAL INVESTIGATION](#)

Photos, videos, reports, figures, tests, data and special analysis of 2015 Boeing Report Brandeis-Bardin Seeps and 2016 DOE-AJU Summary Brandeis-Bardin Soils

Plutonium-239 is a nuclear reactor byproduct that has been called one of the most toxic substances on the planet due to its lethality and use in nuclear weapons. With a half-life of 24,000 years, it also hangs around for a very long time.

Rocketdyne and its successors have repeatedly denied the presence of Pu-239/240 on Brandeis-Bardin property, first in the 1995 report [Additional Soil and Water Sampling – The Brandeis-Bardin Institute and Santa Monica Conservancy](#) (S35 PDF pages; 11.9 MB). "Isotopic plutonium was not detected in any of the field samples collected during the study."

Uranium-238 in the mud was likewise found in the 2004 test at a higher level than any U-238 EPA detected in its extensive radioisotope survey. The sample was exactly 74.4 percent higher than the U-238 BTV reported in the EPA October 2011 Background study report. That amount was above the highest reading of U-238 in Area IV by 27.4 percent.



2004 Brandeis-Bardin at bottom of ravine leading up to Area IV

"The field lab sits at a higher elevation than the Brandeis-Bardin, any third-grader can tell you how the Plutonium 239/240 and Uranium 238 migrates offsite onto the camp," said William Preston Bowling, founder of the SSFL-themed [Aerospace Contamination Museum of Education](#), in a January 19 email to EnviroReporter.com. Bowling first came upon Brandeis-Bardin's warning signs in Meier Canyon in 2007 as well as the water dribbling into the creek, as evidenced by this article's cover photograph. "The sad thing is, the camp owners know about the contamination, even going as far as putting up signs – Do not drink or use water – they would rather put people at risk than upset their "Cash-Cow" aerospace neighbor."

The 2004 soil from Brandeis-Bardin showed substantially elevated beta radiation in both samples according to background numbers for California developed by the nuclear experts at U.C. Berkeley's Department of Nuclear Engineering. The highest gross beta soil sample reading was 2.18 times higher than background for this kind of ionization, the measurement of which is used to determine if man-made radionuclides are impacting a tested medium.

Alpha radiation in the camp's 2004 sludge also came in at over two times the median average according to a U.C. Berkeley nuclear expert's [range of gross alpha](#). Alpha radiation is between 20 to 1,000 times more dangerous to the human organism than other radiation due to its "relative biological effectiveness" in causing cell-death and cancer according to numerous sources.

These soil and water readings in 2004 and 2005 were done in just one spot. An entire area above the hot spot has never been tested. The 1995 Rocketdyne Brandeis-Bardin report included criticism from the camp's veteran environmental tester for not checking out the ravine leading down from Area IV above the gurgling goo. The report indicates that this area may have actually been a *campsite* at a later contamination testing site designated BB-03 at the bottom of the ravine below Rocketdyne.

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/>

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Please see the response to comment 621-3. The determination of whether uranium-238 is from a natural source or man-made source requires comparison of the results with other uranium species and thorium. The ratios determine the origin of the uranium. The uranium and thorium species results were not provided for DOE comment. Regardless, the result was not duplicated in subsequent samples collected near its location and therefore cannot be used as evidence of uranium contamination.

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Commenter No. 621 (cont'd): Michael Collins EnviroReporter.com

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Brandeis-Bardin sampling area in 2005

"Regarding the Campsite Area I drainage, please acknowledge the limitations of that work," radiation physicist Joel I. Cehn says in the report, critiquing its inadequacies. Cehn has been Brandeis-Bardin's an environmental contractor for decades. "There is a 1,200 ft. gap between the lowest soil sample at the top of the hill (BB-17) and the highest soil sample at the bottom (BB-20). This area was not explored. Thus, we cannot confirm that only one ravine is involved, nor how far down the hill the contamination extends. Recall that both tritium and Cesium-137 were detected at the bottom of BB-17. Samples further down the hill could not be collected due to steep terrain, resulting in this 1,200 ft. gap."

The 1995 report showed that tests at BB-03 in 1994 found both Cs-137 and Sr-90 that would be substantially over background values derived by the EPA in 2011 and published in 2012. A Cs-137 sample radiated 65.9 percent over its background. The tests provided to EnviroReporter.com a decade later showed it was still there lending credence to the likelihood that Cs-137 and Sr-90 may still plague the Campsite Area I site.

Radiation in the Water

The chemical sheen glossing the camp water was sampled and analyzed in 2005 from the same unmarked canyon as the 2004 soil test. The [2005 Brandeis-Bardin water report](#) [13 PDF pages; 355 KB], completed in 2006, found Sr-90 over double both the Los Angeles and national averages and Pu-239/240 at nearly half as high as the highest Pu-239/240 pulled and tested in Area IV groundwater by the EPA.

Tritium came in at double background according to H-3 levels cited in an April 21, 1996 Brandeis-Bardin crop testing report recently released by AJU in response to the KNBC I-Team investigation [LA's Nuclear Secret](#) which included Brandeis-Bardin's pollution issues. [The KNBC I-Team brought critical information first reported by this journalist in many cases to a much broader audience. KNBC also shook loose invaluable old reports from Brandeis-Bardin that EnviroReporter.com has used in this exposé.]



2014 Brandeis-Bardin gurgling goo – photo by Brandon Manwell

Beta radiation in the 2005 water was over double the national average in drinking water supplies derived by data provided by the National Research Council (US) Safe Drinking Water Committee. Beta radiation is often associated with man-made radionuclides like Cs-137 and Sr-90.

Brandeis-Bardin's water woes aren't limited to the 2005 report acquired by EnviroReporter.com. The story of the so-called Brandeis-Bardin "bathtub well" includes [DTSC exposing huge amounts of radiation in Brandeis-Bardin water in 2012](#) and then state agencies trying to disprove it in 2014 and beyond.



2011 map shows OS-10 Brandeis-Bardin well with high radiation close to camp center

The well is in one of the main canyons of the [Brandeis-Bardin's outer campus](#) and in the watershed that includes runoff from the SRE. Its official name is Offsite well 10 ([OS-10](#)), a well that filled a bathtub which watered animals and birds at Brandeis-Bardin.

A joint [DTSC/LARWQCB PowerPoint presentation May 21, 2014](#) [38 PDF pages; 3.44 MB] included a revision to the high alpha and beta radiation readings found in the bathtub well, perhaps because the high radiation

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caused a stir when *EnviroReporter.com* first reported on it in its May 23, 2012 exposé [Roulette](#).

"USEPA was granted access to an offsite well on the Brandeis-Bardin property," the article read. "There, at OS-10, the agency detected beta radiation in the well water at nearly three times its MCL for drinking water. Total adjusted gross alpha radiation activity was 8.61 times its MCL, which is even more troubling: alpha radiation is up to 60 to 1,000 times more dangerous than beta or gamma radiation because of the harm it causes upon ingestion or inhalation."

According to the government's revisionism in the presentation, the bathtub well was too turbid with suspended solids to give an accurate reading of the water. "The elevated levels of the suspended and total gross alpha and beta are attributed to the very high turbidity of the sample and is considered to be a result of naturally occurring radionuclide [sic]."

Yet it's clear, literally, from the photo of the bathtub well that the water isn't turbid enough not to be able to see down to the soil resting on the bottom. For professionals to draw a water sample with "very high turbidity" they would have had to stir up the water in the tub, which is unlikely that they would do.



2014 DTSC photo shows Brandeis-Bardin OS-10 well with running hose

But even more obviously, the photo shows clear water running out of a hose into the tub, keeping it filled and overflowing it. Any competent agency should know to take the sample from the hose, not the tub. Or both.

The last part of the sentence quoted preceding says the sample "is considered to be a result of naturally occurring radionuclide [sic]" which begs the question of why LARWQCB and DTSC didn't test the water with a gamma spectrometer to determine, not "consider", what is making the water so hot? By not determining the radionuclides causing the high readings, no fingers could be pointed at the most likely source radiating higher up in the Simi Hills. This unsound science also shortchanged anyone at Brandeis-Bardin who might have cared about watering their livestock with exceptionally radioactive water.

Plutonium Pipeline?

The conclusion that the bathtub well showed no man-made radiation was and is part of DTSC's mantra that no SSFL contaminants have gotten offsite. Straight faced at years of meetings, DTSC officials essentially maintain that chain-link fences somehow prevent the huge amounts of radiation and chemicals at SSFL from leaving their mountaintop compound.

Rocketdyne got into the act as well nearly twenty years before DTSC began its denial campaign. According to its McLaren/Hart report on Brandeis-Bardin for Rockwell International in 1995, a year before Boeing bought Rocketdyne, this higher than normal bathtub well radiation shouldn't be there at all.

"No radionuclides were detected above measure background in any of the human activity areas at either the Conservancy or Brandeis-Bardin," the report says. "Radionuclides were not detected in groundwater in the two private wells that were sampled."



2014 Brandeis-Bardin surface water - photo by Brandon Manwell

Somehow, this comprehensive report failed to include the gurgling goo's surface water even though it appears to come down from Area IV or from its groundwater which is topped with a chemical sheen as it continues on its way to Meier Canyon's creek. "Surface water data were not evaluated statistically because there was only one background sample from both rounds of sampling," was the befuddled excuse given for not testing the obvious.

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Boeing weighed in on potential Brandeis-Bardin contamination with a July 29, 2008 paper entitled [Plutonium-238 at Brandeis-Bardin](#) [26 PDF pages; 4.65 MB]. "It should be noted from Appendix D that all samples were non-detect for plutonium-239 which is the plutonium isotope usually associated with nuclear reactor operation," the paper says.

Yet Plutonium-239/240 was detected in both Brandeis-Bardin soil and water in 2004 and 2005. Analysis of the scant original Brandeis-Bardin environmental documents AJU has released since the 2015 KNBC investigation began failed to reveal any testing for Pu-239/240 let alone detecting it.

It's not just Area IV that may be leaking radiation downhill into Brandeis-Bardin. Nor is it just radiation. William Preston Bowling joined in discovering black and grey blocks of lung-destroying asbestos in one of the main drainages into the camp in 2007 – blocks that stood taller than he did along with broken pipes with the toxic heavy metal antimony.

"The remediation began after the state's Department of Toxic Substances Control (DTSC) issued lab owners Boeing and the NASA an Imminent and Substantial Endangerment Order on Nov. 1 for the cleanup of asbestos-containing material strewn along the creek bed from 1965 to 1978 by lab workers working at the former NASA liquid oxygen plant (LOX) nearby," states the article [Cleaning Up Rocketdyne](#) in the November 21, 2007 *Ventura County Reporter*.

The area had approximately 500 cubic yards of the tainted soil trucked offsite to a licensed landfill. 8,000 cubic yards of soil polluted by PAHs were excavated as well from the adjacent former shooting range and along the Northern Drainage. The work required approximately 764 truckloads to get rid of the contaminated dirt and detritus. "The deadly debris stretches partway down the intermittent headwaters of the so-called Northern Drainage, which leads into the American Jewish University on Brandeis-Bardin's sprawling campus in Simi Valley below," the article written by this reporter said.



Contamination in drainage above Brandeis-Bardin dug out in 2007

And that wasn't all. Boeing was forced to remove contaminated soil in 2009 on the NASA part of the lab at Outfall 009 which leads down to the main eastern drainage into Brandeis-Bardin.

"The Boeing Company, on behalf of NASA, is currently preparing to excavate soil at Outfall 009," wrote Boeing's SSFL radiation manager Phil Rutherford to the chief of the Radiologic Health Branch of the California Department of Public Health September 11, 2009. "This soils is being removed in order to mitigate NYPDES [National Pollutant Discharge Elimination System] storm water runoff exceedances of dioxins and heavy metals." [sic]

The contaminants sloshing down into Brandeis-Bardin during infrequent rains also contained radioactive contamination that Boeing had to dig out of the NASA soil. A [NASA document](#) obtained by *EnviroReporter.com* shows that the radionuclide Cesium-137 was found in five areas in the heights above Brandeis-Bardin. The highest hot soil had Cs-137 at 3.4 times background, which was dug out and sent to the low-level radiation dump US Ecology in Grand View, Idaho in 2013.

A Troubled History

NASA owes its very genesis to Wernher von Braun who oversaw the Mercury and Gemini programs and developed the Saturn V rocket that took America to the moon. The secretive SSFL site was set up to test the V-2 war rockets that von Braun had developed for Nazi Germany in World War II.

"[A] deep depression separating a circular arrangement of hills became the site of Rocketdyne's first three test stands," says a 1987 Rockwell International booklet entitled [The Hill](#). "As direct copies of test stands that had been in use at the German WWII test facility at Penneunde, they were designed to hold not only the engine to be tested, but the entire vehicle as well."

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Wernher von Braun, who attained the rank of Major in the Waffen SS, following Reichsführer SS Heinrich Himmler to the rocketeer's initiation into the SS

These first rocket stands erected at the SSFL were built at the Bowli Test Facility, or "Bowl," as reported in the 2009 [EnviroReporter.com](#) article [Bowled Over](#). "Thanks to the Nazi designs brought to the U.S. after the war by SS officer and rocketeer Wernher von Braun, these three stands built in 1949 played a crucial role in America's burgeoning rocket program."

A chance encounter with a former Rocketdyne employee at a February 5, 2014 [SSFL Work Group](#) meeting revealed more about the lab's Nazi rockets origins. Taking a vape break during the meeting, a former worker of 30 years named Don told this reporter that von Braun's original rocket test stand was not built from scratch plans. "They took it apart in Europe and

shipped it over unassembled," he said. "It came in mahogany boxes with Nazi swastikas emblazoned on them."

"Von Braun's V-2 rockets slaughtered 7,250 military and civilian personnel in World War II, mostly in London and Antwerp, Belgium," reported [EnviroReporter.com](#) in the 2014 piece [High Stakes for Hot Property](#). "Production of his lethal rockets cost 20,000 Mittelbau-Dora concentration camp inmates their lives with 9,000 dying from exhaustion alone. About 350 of these Nazi slaves were hanged, including 200 for sabotage, with the remainder shot or dying from disease and starvation."

One French resistance fighter enslaved at von Braun's rocket works was [Guy Morand](#). In 1995 he testified that he was nearly executed by von Braun in 1944 after a supposed sabotage attempt. "Without even listening to my explanations, [von Braun] ordered the Meister to have me given 25 strokes... Then, judging that the strokes weren't sufficiently hard, he ordered I be flogged more vigorously... von Braun made me translate that I deserved much more, that in fact I deserved to be hanged... I would say his cruelty, of which I was personally a victim, are, I would say, an eloquent testimony to his Nazi fanaticism."

Instead of being tried for war crimes and shot, von Braun went on to become a legend in American rocketry despite his infamous Nazi past. He was one of over 100 German scientists captured by the U.S. at the end of World War II in "Operation Paperclip."



Von Braun worked closely with Nazis developing rocket designs later tested at SSFL

The morality over using suspected Nazi war criminals by the United States in an effort to best the Soviet Union did not end with America's rocketry program. A 600-page Justice Department report released in 2010 that was suppressed by the government for four years revealed that America served as a "safe haven" for nearly 10,000 Nazis after the war. Surpassing the Soviets in space clearly trumped any qualms about using a possible Nazi war criminal with concentration camp prisoners' blood on his hands.

Southern California's Nazi history doesn't end with the origins of the Santa Susana Field Laboratory. Less than 20 miles away is a Nazi lair that this reporter first wrote about for [Los Angeles](#) magazine in a 1996 article entitled [Murphy Ranch](#).

Yet for all this actual Nazi history in Southern California, there is nothing about either Wernher von Braun or SSFL or Murphy Ranch in any of the predominate Jewish institutions in Los Angeles dedicated to remembering the Holocaust. Nothing in Brandeis-Bardin's literature or online history mentions the Nazi-made rocket stand that loomed high in the Simi Hills above the Jewish camp for decades belching smoke and pollutants during test firing.

Rocket Smoke and Gunsmoke

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Commenter No. 621 (cont'd): Michael Collins EnviroReporter.com

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Dr. Shlomo Bardin founded the Brandeis Camp Institute (BCI), naming it after Louis D. Brandeis, the first Jewish Supreme Court Justice who provided the vision and funds for the programmatic enterprise, according to the [BCI website](#). Bardin bought 2,200 acres of land in the hills above Simi Valley in 1947, a year before the U.S. government acquired 2,100 adjacent acres to secure secluded land for von Braun's rocket testing.

"In 1953, Dr. Bardin established Camp Alonim (Hebrew for 'oak trees') as a residential summer camp for children, ages 8 to 16," says BCI. "Camp Alonim provides a non-denominational, Jewish experience brought to life through sports, the arts, nature, and learning in a safe and embracing community."

One of the first signs of trouble at the camp came in 1957 when "discolored water" prompted Bardin to call the sheriff according to [documents obtained by KNBC's I-Team](#). Bardin's lawyer subsequently sent SSFL brass a letter saying the lab "caused and permitted great quantities of waste material to be carried down a stream running through Brandeis Camp" and that "this unlawful pollution of said stream endangers the camp water supply and the health of hundreds of children and adults who regularly use its facilities."



2006 Brandeis-Bardin olime 49 years after camp founder complained to Rocketdyne about "discolored water" in 1957

Rocketdyne replied that the water wouldn't kill people but it could destroy vegetation and make livestock sick. Bardin apparently "insisted that Rocketdyne stop the pollution" according to the KNBC report, but nothing seems to have been done according to the documents and eyewitness accounts.

Indeed, untold numbers of hikers and campers made the heights under the lab their world to explore. *EnviroReporter.com* has obtained an old map that shows campsites at the bottom of the hill in Meier Canyon. One of them, as noted earlier, appears adjacent to the area of the 2004 and 2005 tests that detected Plutonium 239/240.



Ralph Powell arrived in the Simi Hills in 1962 and went to work as a patrol officer in Area IV. The longtime Simi Valley resident recalled working in the nuclear zone at a [SSFL Work Group meeting September 24, 2015](#). His recollections included being engulfed in explosions from the FSDF, which drains into the same canyon Brandeis-Bardin where *EnviroReporter.com* found high plutonium and uranium with Area IV's atomic signature.

"A famous cowboy road his horse up to the property line and says 'I'd like to speak to a supervisor' and [the supervisor] says 'What's your problem, sir?'" Powell told the rapt Work Group audience of a story from 1962. "And he says I have 28 head of dead cattle down here that drank water out of this pond." So he assumed it was runoff from this disposal pit which it probably was."

Former SSFL security guard Ralph Powell speaking before a SSFL Work Group meeting September 24, 2015

Powell, who has suffered from extreme peripheral neuropathy, confirmed exclusively to *EnviroReporter.com* that the "famous cowboy" was indeed James Arness. Ten years later, Arness donated his land to Brandeis-Bardin. That included the working ranch and livestock.

"In 1972, the neighboring land owner, James Arness, star of TV's still wildly popular *Guns* donated his 950 acres, making the Brandeis-Bardin property 3,200 acres," according to AJU's Brandeis-Bardin-based [Camp Alonim website](#). "This is the second-largest piece of land held for Jewish communal purpose, second only to the State of Israel."

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The man known as Marshall Matt Dillon for 20 years on television originally bought the land in 1960. "[W]here I could raise my kids on a ranch with horses and farm animals, a place of beauty with a big sky," Arness wrote in his 2001 autobiography. Those farm animals included distinctive and tough white Charolais cattle. These cattle have roamed all through the Simi Hills as they graze for decades.



Actor James Arness as Marshall Matt Dillon in Gunslinger circa 1956

Over the years, cattle grazing in Area IV were becoming a problem for Rocketdyne. In a June 25, 1991 memo obtained by EnviroReporter.com, Rocketdyne honcho Steve Lafflam related that the cattle's droppings were so hot that they were interfering with restoration of the FSDF.

"The cattle were identified as a source of RA [radiation] contamination by the DOE Tiger Team," Lafflam wrote. "Too [sic] keep them we would have to start doing analysis on the animals. There is continually the evidence of "meadow muffins" in the "burn pit". The Burn pit will be cleaned up by 12/92 (State Order) and then we could go back to the lease if we wanted to."

The radioactive turds, surely dropped all over the place including Brandeis-Bardin where the Charolais cattle herd originated, came from the bovine eating hot vegetation and drinking hot water. Flora sucks up radioactive and chemical contamination in the soil which is eaten, in this case, by cattle which then spread it all over the place through their droppings. Radiation-tainted water would certainly have been accessible by these cattle.



White cattle graze in Area IV in 2007 - photo by William Preston Bowling

For the cow flops to be hotter than the burn pit indicates that the vegetation and water holes were highly radioactive. That Rocketdyne actually leased Area IV for the wandering cows' grazing indicates that the beef and milk from these cattle could have been contaminated and consumed by unsuspecting humans. Whether Lafflam or any Rocketdyne official ever informed Brandeis-Bardin of the radioactive meadow muffin herd is unknown.

Nor is it known if the producers, actors and crews of numerous films, TV shows and commercial productions filmed at BCI were ever told of the environmental situation that they faced working there. An educated guess would be they were not. Many productions have been made at the camp including *Jurassic Park*, *Star Trek VI*, *Melrose Place* and *Diagnosis Murder*.

Ranch Radiation

The distinctive white cows still roam the hills as the [AJU photo of white cattle](#) shows in its [The Land](#) web page. An August 2012 Camp Alonim video features two men lightheartedly blowing on instruments in front of a couple of the cows.

Brandeis-Bardin is a working ranch with youngsters riding horses, using mountain bikes and taking hikes. EnviroReporter.com can only confirm the presence of two or three warning signs nailed to one or two trees on the sprawling campus boasting "countless hiking trails" warning hikers of any contaminated water and none regarding potential dangers from dust inhalation and soil to skin contact. A 2007 photograph shows the signs nailed to an oak tree up Meier Canyon saying "WARNING DO NOT DRINK OR USE THIS WATER" and "NO HIKING BEYOND THIS POINT."



Brandeis-Bardin warning sign in Meier Canyon in 2007 - photo by William Preston Bowling

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/1/>

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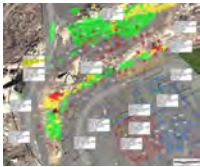
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Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

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While most of Area IV drains through the Southern Buffer Zone and Bell Canyon into the Los Angeles River, significant parts of it drain into Brandeis-Bardin down into the Arroyo Simi and groundwater which is used as blended drinking well water in eastern Simi Valley mixed with imported supplies. This watershed includes the still radioactively contaminated site of the [SRE](#).



The SRE partially melted down in 1959 releasing [hundreds of times more radiation](#) than the structurally fortified Three Mile Island reactor did when it partially melted down in 1979. Additionally, the northern NASA sections of Area I and Area II drain into Brandeis-Bardin.

Two reports found elevated cancers and other risks within a few miles of Rocketdyne in 2006. "The new studies were commissioned in 2000 by the state Agency for Toxic Substances and Disease Registry, at a cost of \$700,000, after ATSDR had outraged the community by performing a month-long preliminary review the year before and declaring that SSFL chemicals and radiation were harmless to locals," this reporter wrote in a February 16, 2006 [Los Angeles ValleyBeat](#) article called [The Fallout](#).

Cesium-137 found at 183 times background at Sodium Reactor Experiment site overlooking and draining into Brandeis-Bardin

"The cancer results were nothing less than astonishing," the article reported. "Hispanics living within two miles of SSFL had 38 percent higher rates of all cancers than Hispanics (and non-Hispanic whites) living over five miles away from the lab and a 252-percent-higher ratio for chemosensitive cancers. Within the same distances and parameters, Hispanics living within two miles of SSFL had 189 percent higher rates of lung cancer, 271 percent more bladder cancer and 430 percent higher rates of melanomas."

The 2006 UCLA report, [Potential for Offsite Exposures Associated with Santa Susana Field Laboratory](#), showed offsite exposure data in almost every direction from SSFL in air, water and soil. Two radionuclides, Cesium-137 and Plutonium-238, stand out in the UCLA report as being present in above normal amounts in Brandeis-Bardin soil, readings even higher than in the already elevated 2004 Brandeis-Bardin soil tests.

As measured against the EPA's October 2011 [Final Radiological Background Study Report – Santa Susana Field Laboratory](#) (286 PDF pages – 22.0 MB), soil samples from Brandeis-Bardin were significantly higher than their now-established backgrounds in the 1995 McLaren/Hart report for "Campsite Area 1 (BB-03)." The 1994 samples and tests found Cesium-137 was 65.9 percent over its BTV, Strontium-90 registered 22.5 percent over Area IV background and Plutonium-238 was over 9.4 times normal.



Subsurface soil sampling for radiation in Area IV part of \$41.5 million study of contaminated site

According to [documentation obtained by EnviroReporter.com](#), the California Highway Patrol considers any material or situation over three times background to be the triggering level for a hazardous materials incident. The highest Pu-238 soil reading at Brandeis-Bardin was over 3 times CHP's HazMat trigger yet Boeing in 2008 explained away these worrisome readings saying a Rocketdyne test again in 1995 found, mysteriously, nothing. "The 1994 study results therefore do not confirm 1992 study results and plutonium-238 is therefore not a concern."

Perchlorate has been found in 18 wells in Simi Valley, as noted in this reporter's 2002 expose [Rocketdyne Ranch](#), which helped lead to the creation of the Upper Las Virgenes Open Space Preserve instead of a massive housing development due to groundwater perchlorate concerns. The

621-9

621-9 Please see the response to comment 621-3. Studies conducted by EPA and summarized by DTSC demonstrate that there is no radioactive Area IV contamination leaving Area IV. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. The DTSC recently performed a review of the radiological and chemical data from investigations conducted at and near the SSFL and the American Jewish University - Brandeis-Bardin Campus and recorded their evaluation in a white paper dated May 2, 2017 (DTSC 2017a). The conclusions of the study are summarized in Section 2.7, "Offsite Impacts" of this CRD.

621-4 cont'd

621-10

621-10 DOE acknowledges your comment and refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information about contamination in the area around SSFL, including soil testing that has been done and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of illnesses in the vicinity of SSFL, including the studies referred to in the comment. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

621-3 cont'd

Commenter No. 621 (cont'd): Michael Collins
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preserve, formerly known as Ahmanson Ranch, also borders Area IV and the Southern Buffer Zone on the other side of the lab from Brandeis-Bardin.



2004 Brandeis-Bardin pipe dribbling water

"The highest reading was 19.2 ppb [parts per billion], nearly ten times the new allowable limit of the powdery white substance in California drinking water," the *Ventura County Reporter* newspaper cover story read. "Perchlorate has been found in a former sodium burn pit at SSFL and was disposed of in the eastern part of the laboratory where munitions and propellant testing took place."

Perchlorate is considered a "precursor chemical" in groundwater meaning it moves faster from its source than other toxic contaminants. Brandeis-Bardin is much

closer to the source, SSFL being the most obvious candidate, than the 18 Simi Valley wells that have tested positive. In 2003's [The Sins of Rocketdyne](#), this reporter noted that Rocketdyne/Boeing official Steve Lafflam had claimed that the perchlorate in Simi Valley wells could have come from road flares or fireworks.

Actually, almost all of the perchlorate contamination nationwide comes from rocket fuel. The solid rocket fuel booster was used in massive quantities at SSFL. Boeing admits that more than a ton of perchlorate was burned in open pits at SSFL to dispose of it. Perchlorate has been found in about a quarter to a third of monitoring wells in Simi Valley, and the two biggest supply wells.

As *EnviroReporter.com* would later find out in the course of this long investigation, perchlorate has been detected dozens of times at Brandeis-Bardin. Indeed, it was just one toxin in a chemical kaleidoscope that would only be pieced together years later.

Chump Change

Whatever reservations Dr. Bardin had about "Rocketdyne pollution" fouling the camp's water in 1957 seemed to have evaporated by 1964 when the Brandeis Mutual Water Company was established. Perhaps James Arness didn't tell Bardin about his cattle dropping dead, possibly from drinking contaminated water in the early 1960s, when he donated the land to Bardin's Jewish institution a decade later.

By the mid-1990s, after around 15,000 alumni had stayed at the camp recreating in its intermittent streams and exploring its dusty trails, Brandeis-Bardin knew it had a serious problem. The *Los Angeles Times* broke the news with a December 15, 1995 story called [Institute Sues Rocketdyne Over Toxics](#). In the piece, institute lawyer Helen Zukin tries to walk a fine line on the use of groundwater on the property:

"They cannot and are not using the ground water," said Brandeis' lawyer, Helen E. Zukin, alleging that enough toxic solvent has leaked across the property line to render the ground water undrinkable. The institute, however, has never used the ground water, she said."

The institute seemed to have Rocketdyne dead to rights. "In or about August, 1991 defendants, and each of them, caused plaintiff's soil and groundwater to be tested in order to determine if plaintiff's property was also contaminated," the [lawsuit read](#) in documents unearthed by *KNBC*. "On or about September 3, 1991, initial results of said testing revealed that plaintiff's groundwater was contaminated. Before this date plaintiff did not know nor could have reasonably known of any potential contamination of plaintiff's property."

Once they 'did know,' Brandeis-Bardin claimed a galaxy of toxicants had trashed their land and water. "Defendants, and each of them, while owning and operating facility, allowed hazardous materials, including, but not limited to trichloroethylene; mercury; polychlorinated biphenyls; dichloroethylene; vinyl chloride; dioxin compounds; and radioactive cesium, and strontium, (hereinafter, "hazardous materials"), to be disposed of and released into the soil, air and groundwater. These hazardous

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materials have subsequently seeped into, and come to be located in the soil and groundwater of the real property."

Yet even with its solid case against Rocketdyne, Brandeis-Bardin settled with new lab owner Boeing in 1997 for a net of around \$1,862,817.25 after selling its 180 acres of tainted land on SSFL's northern border with the camp, now known as SSFL's "Northern Buffer Zone." It is not known whether or not Brandeis-Bardin gave up any future right to sue over contamination, demand SSFL cease releases onto its property, or to force the polluter to clean up any contamination, past, present or future. It seems unlikely that Boeing would have made the deal if it would remain liable for new toxin finds such as the ones found in this investigation. Neither party has commented on the confidential settlement.

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2005 Meier Canyon in Brandeis-Bardin downhill from SSFL's Area IV

Read more at [BRANDEIS-BARDIN'S TOXIC DENIAL INVESTIGATION](#)

Photos, videos, reports, figures, tests, data and special analysis of 2015 Boeing Report Brandeis-Bardin Seeps and 2016 DOE-AJU Summary Brandeis-Bardin Soils

For years, this reporter and others in mainstream and alternative print media on the SSFL beat were under the impression that Brandeis-Bardin took Rocketdyne/Boeing for at least \$30 million. We were wrong. Not only did Brandeis-Bardin settle for chump change, it may have given away any say in further contamination of its land by SSFL. Today, the lab is years and hundreds of millions of dollars away from the only remediation that will prevent more pollution from continuing to plague downhill lands around the lab, a cleanup to background.



2005 Brandeis-Bardin warning sign with bullet holes rests on ground leaning against tree

This baffling settlement was followed by years of no warnings to camp visitors, employees or tenants of the potential dangers that caused Brandeis-Bardin to sue in the first place, other than those few signs in the far reaches of camp. While it may have settled for relatively few dollars, Brandeis-Bardin succeeded legally in its assertions because they were almost certainly true. Warning its visitors of the hazards would seem the logical thing to do in the wake of revelations of its own.

Instead, Brandeis-Bardin has endeavored to paint the place as radiation and chemical free from SSFL even though no major cleanup at SSFL has occurred. For that unlikely scenario to be true, contamination at the top of the hill would have had to somehow magically stayed in place. Newly reported test findings verified and confirmed by *EnviroReporter.com*, along with those by DOE, NASA and Boeing as detailed in this exposé, clearly indicate that is not the case.

Preemptive Strike

Brandeis-Bardin's efforts to declare its property clean included an unsolicited September 28, 2007 email from a camp director to *EnviroReporter.com*. Apparently, our reporting on [Bunkie Cannon](#) had hit a little too close to camp and prompted a series of "prebuttals" from Dr. Gabe Goldman, self-described "Director of Experiential Education" at Brandeis-Bardin.

"My name is Gabe Goldman and I was hired in 2005 by the Brandeis Bardin Institute in Simi Valley to start a new Jewish environmental education program." Goldman wrote to our general contact

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/>

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address. "As you know, our property lies directly beneath the cliffs of the former Rocketdyne disaster. Before moving here in 2005 from the East, I required that the Institute conduct a study of possible environmental pollution on the land. The Institute agreed and also showed me where it keeps the environmental testing records it has since the late 1980s when it began yearly testing."

"I came here and spent three days personally collecting samples of ground water, well water (we have a dozen capped wells), soil samples, fruit and plant samples and we even milked our cows – not something they are used to," Goldman continued. "We collected two dozen samples from all areas of our 3,000 acres... The tests included all the heavy metals, perchlorate and the other assortment of radioactive material and other pollutants so often found at government sites. The results that came back were clean. Anything that was an elevated level above normal background averages was still well beneath CA or national standards for concern. The milk tested better than the raw milk from Trader Joes [sic]"



Tons of toxic perchlorate were used during decades of over 30,000 SSFL rocket tests

What Goldman failed to mention was that in the May 15, 2006 memorandum from camp radiation physicist Joel I. Cehn to an unidentified, presumably Brandeis-Bardin, official was that perchlorate in any food substance at any level produced at the camp was cause for alarm. Perchlorate damages the human thyroid causing developmental damage especially in infants and children that will manifest oft-times in intelligence loss and impaired organ development. Pregnant women are especially vulnerable to perchlorate's toxic punch.

California's limit for perchlorate in drinking water is 6 parts per billion, or ppb. The memorandum, courtesy of a limited number of documents that AJU gave to the KNBC-Team, said that a whopping 14.9 ppb of perchlorate was in its 2004 milk, over double the state limit. The scant report doesn't say what the camp did with its milk.



April 2011 white cows in Runkle Canyon with Area IV in background – photo by William Preston Bowling

Goldman didn't mention the troubling Brandeis-Bardin milk perchlorate findings, only that they weren't as bad as Trader Joe's (actually the report says Vons). Nor did he cite Cehn's July 2007 "Summer Testing Report" that found 5.8 ppb in vegetation in the Gan area garden and 2.33 ppb in the Organic garden's vegetation. "The only significant finding this year is the perchlorate detected in milk and vegetation," Cehn wrote. "[Milk] result indicates that area cows are grazing on grass containing perchlorate."

Goldman's 2007 email to EnviroReporter.com continued:

"Runkle Canyon borders on the southwest side of our property and I've been reading your information about what you're finding there. I don't doubt what you're finding but wonder why we haven't found anything here."

Actually, as this article amply shows, plenty had been revealed about the radiation and chemicals in Brandeis-Bardin before Goldman's 2007 missive. His reasoning resembles some of the rhetoric years later that has been leveled against KNBC for its sin of even reporting about Brandeis-Bardin's radiation and chemical issues.

Nuclear Reactions

Unknown to EnviroReporter.com as it investigated, prepared and produced this investigation, KNBC – Channel 4's I-Team would come out with Brandeis-Bardin coverage that produced new information. Along with shaking loose radiation and chemical testing data, KNBC precipitated reactions from

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/1/>

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American Jewish University, former Brandeis-Bardin employees like Gabe Goldman, and individuals who attended Camp Alonim over the decades.

"I was a CIT, Counselor and riding instructor at Alonim 3 summers, 1969-71," commented Lisa Chait Appelbaum on the [Facebook group Camp Alonim of the 1970s \(and 60s\)](#) page November 11, 2015. "My memory is that at least once a week Rocketdyne would shoot off it's [sic] crazy jet fuel jets straight up into the air, right over camp. Between that and the Santa Su Field Lab, contamination of Alonim was probably astronomical. I am not saying I believe anyone at Brandeis was involved in a cover-up, but companies like Rocketdyne and SSFL are known for any and all attempts to keep what they've done to the environment and possibly humans under wraps."



Bowl Test Facility night tests of rocket engines on Werner von Braun's original test stand would light up the sky with the roar heard for miles

Ruminations, heartbreak and betrayal marked some of the comments. "The attacks on [KNBC's] Joel Grover a well respected journalist as well as former employees who are well respected members of our community are just so wrong," commented Leslie Sackheim the next day on the forum. "I had a beautiful niece who attended many retreats at Alonim during her childhood. We lost her a few years ago after a year long ugly battle with non-smokers lung cancer. She was in her twenties and was suppose[d] to be married the same month she passed. Watching her suffer was horrific and heartbreaking. I can't stop asking if her illness and time at Alonim were related?"

David Dassa, a forty-year self-described "role model to countless children and young adults who have spent time at Camp Alonim," shared with the forum an email he sent November 12, 2015 to Robert Wexler, president of AJU. Dassa had been interviewed by KNBC for its investigation and had been criticized for it by some in the Jewish community.



2006 Brandeis-Bardin water downhill from Area IV

"Without disclosing all reports to the public for testing that was performed (and continues to be performed) at Brandeis over the years, there is no transparency as to the safety of the Brandeis Bardin grounds," Dassa wrote in the email. "Parents are entitled to full disclosure so they can decide whether or not to send their children to the Institute. Neither Brandeis nor the AJU have provided parents with this choice - something that I find unconscionable and not within the context of Judaism as I know it."

Dassa was also amazed by the trove of previously secret documents detailing Brandeis-Bardin's financial settlement of the contamination of its land in the mid-1990s. "Now, as the confidential settlement agreement with respect to the lawsuit has been made public, I see that my worst fears have been confirmed," Dassa wrote to Wexler. "It is hard to fathom how, on the eve of trial for a matter of this magnitude (where who knows how many thousands of lives were and may continue to be put at risk), that Brandeis settled the case for a mere \$3.2M, with 35% of that amount paid to Helen Zukin and an outside law firm (noting that both Helen and the outside law firm each "kindly" donated \$35K of their fees back to the institute)."

Closing with an appeal to Jewish decency, Dassa spelled out what he felt needed to be done by AJU. "It is extremely unprofessional, divisive, and very sad that the AJU and you personally have chosen to discredit me and other leaders in the Jewish community," Dassa wrote. "This constitutes Lashon Hara [[evil tongue](#)], rather than Tikun Olam [[repair of the world](#)]. I believe that only with an apology and full disclosure by the AJU of any and all soil and ground reports, will Brandeis-Bardin be able to perhaps move forward."

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Gabe Goldman exploded in indignation at the mere suggestion something could be amiss at Brandeis-Bardin claiming he knew the land better than anyone other than Arness' foreman who stayed on after he donated the ranch in order to keep running it. "The KNBC story on Camp Alonim / BBI is the crudest and ugliest example of "investigative reporting" that I've seen since reading about Israet," Goldman declared. "Additionally, testing of water and soil and plants on the BBI side under that range never showed any contamination, radiological or chemical. When KNBC says they uncovered a document, it's more bullcrapola – one of the former BBI Board or staff gave it to them."



One of the Brandeis-Bardin canyons leading down from the Northern Buffer Zone and Area IV above in 2006

American Jewish University wasn't done with KNBC either. "This latest story from KNBC continues to create gross misperceptions about the Brandeis-Bardin property and more than two decades of environmental test results that affirm the property is safe," said Wexler in a [Nov. 21, 2015 letter](#) to the "Alonim Family."

"Earlier this month, the DTSC confirmed the safety of the Brandeis site at a public workshop. And as recently as October 15, 2015, the DTSC wrote: "**Based on available data, there is no evidence of contamination from SSFL [the Santa Susana Field Laboratory] that poses an off-site threat to human health or the environment.**" This is very clear-no threat to human health or the environment extending beyond SSFL. This statement can only be understood to refer to the entire 2,700-acre Brandeis-Bardin property." [Wexler emphasis]

In another bullet point, Wexler wrote "In 1995, the EPA determined there were low levels of contamination in remote areas of what was then Brandeis-Bardin property, but declared: "...the theoretical cancer probability or risk to campers and camp counselors is **less than the EPAs.**" [Wexler emphasis]

In May 2016, AJU claimed that new "extensive" testing it commissioned proved that there was no "unacceptable" risk to public health on its property. But an [NBC4 investigation revealed numerous problems](#). Experts including Bob Alvarez, former senior adviser to the United States Secretary of Energy, and Dan Hirsch, director of the Program on Environmental and Nuclear Policy at UC Santa Cruz, criticized the study for taking too few samples.

The study took only 14 samples out of Brandeis' 2,878 acres. Even so, according to Hirsch, one of those 14 samples found Strontium-90 at two and half times local background. Critics of the study also noted that it did not test for many chemicals known to be on the SSFL property. AJU also claimed that the US EPA had found the site safe – claims denied by EPA when asked by the KNBC i-Team.

The lab that AJU chose to conduct the study, Tetra Tech, was recently fined \$7,000 by the Nuclear Regulatory Commission for deliberately falsifying soil samples from another former nuclear site in San Francisco. Even so, by simply agreeing to "Discuss the facts and lessons learned from this event with its employees who are engaged in licensed activities within 180 days, emphasizing the importance of not engaging in willful activities in violation of NRC's regulations," Tetra Tech avoided the fine.

This time, AJU lashed out at KNBC before the segment even aired, sending KNBC [a letter](#) stating that, "We remain concerned that the piece you plan on airing tonight might defame BBC by implying that wrongful conduct has been perpetrated by AJU or that the safety of our campers or visitors to our campus has in some manner been compromised."

"Common Laboratory Contaminant"

American Jewish University's blanket denials and anti-media attacks on KNBC don't appear to have taken into account all of the facts. In addition to the radiation found at Brandeis-Bardin that

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EnviroReporter.com has exposed thus far in this investigation, there is even more recent data showing toxin-impacted dirt and water on the site.



Northern Seeps of Brandeis Bardin

Three months before Wexler's Alonim Family letter, DTSC released a massive 6,549-page report called [Report on Seeps Investigation SSFL Summary of Work Completed through IQ 2015](#) [6,549 PDF pages; 265 MB] and sent it to its, presumably, large e-list that includes EnviroReporter.com. AJU should have been on the list too as it allowed Boeing and its subcontractors on its property to take many tests through the years, the results of which are in this report.

Co-funded by Boeing, the DOE and NASA, the study looked at "165 verified seep locations at and surrounding SSFL," according to the report. "This area includes the Brandeis-Bardin Campus of the American Jewish University."

The breadth of toxins identified at Brandeis-Bardin was such that EnviroReporter.com created the page [2015 Boeing Report Brandeis-Bardin Seeps](#) to document them. This report alone reveals at least 338 detections of toxic chemicals found on Brandeis-Bardin property. Some of these detections were near where the camp has held outdoor activities according to Danielle D.'s flickr [Brandeis-Bardin photostream](#) from a survival camping class March 2, 2008, pictured in this article. Danielle Directo-Meston, aka Danielle D., did not respond to emailed requests for comment. Gabe Goldman surfaces in several of the photographs appearing to show the campers how to make a shelter out of hay.

The thick Boeing report is a toxic treasure trove. Hundreds of tests done on Brandeis-Bardin water at multiple sites reveal the presence of perchlorate, trichloroethylene (TCE), toluene, carbon disulfide, cis-1,2-DCE, methylene chloride, bromomethane, ethylbenzene and acetone.

"Acetone is a common laboratory contaminant, and was detected twice," the report said of the detections at seep S-19/FDP-207, a rare admission by Boeing that contaminants from SSFL were the source of the hits they were getting in Brandeis-Bardin. But even with this stating of what would seem obvious, the report later shows that acetone was actually detected eight times at S-19/FDP-207.



"Acetone is a manufactured chemical," says the [ATSDR](#) says of this volatile organic compound (VOC), "[A] colorless liquid with a distinct smell and taste. It evaporates easily, is flammable, and dissolves in water."

"Acetone is a common laboratory contaminant, and was detected twice," the report said of the detections at seep S-19/FDP-207, a rare admission by Boeing that contaminants from SSFL were the source of the hits they were getting in Brandeis-Bardin.

The chemical, which affects the hematological and neurological organ systems, was found in five different Brandeis-Bardin seeps 59 times. Boeing's report subcontractors seem to fail to notice the discrepancy in the number of actual positive contaminant identifications themselves.

The Boeing report continues to contradict itself repeatedly. While perchlorate was detected twice at S-19/FDP-207 and dozens of times at multiple water sources in Brandeis-Bardin, the study states "Perchlorate has not been detected at any SSFL seep, and no VOC has ever been confirmed to be present at any off-site seep location."

Likewise, other VOCs have been detected at different seeps hundreds of times on Brandeis-Bardin as the Boeing report shows in graphs, maps and data yet denies it in its explanation. Just seep S-19/FDP-207's chemical cocktail list shows that.

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Commenter No. 621 (cont'd): Michael Collins

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Brandeis-Bardin seeps northwest of SSFL include S-19/FDP-207

Cis-1,2-DCE is also a VOC and was found nine times at S-19/FDP-207 from 2002 to 2009. The highly flammable, colorless liquid has a sharp, harsh smell and is used in the production of solvents and other chemical mixtures.

"Lower doses of cis-1,2-dichloroethene caused effects on the blood, such as decreased numbers of red blood cells, and also effects on the liver," says the [ATSDR](#).

"The long-term (365 days or longer) human health effects after exposure to low concentrations of 1,2-dichloroethene aren't known. One animal study suggested that an exposed fetus may not grow as quickly as one that hasn't been exposed."

Colorless and highly toxic carbon disulfide was also detected at S-19/FDP-207 eight times in seven years. "[C]arbon disulfide is extensively and rapidly absorbed via inhalation, oral, and dermal routes," says the [ATSDR](#). "[I]ts distribution is greatest in organs such as the brain and liver."

One experiment involving carbon disulfide involved dipping a human hand in it to see if it absorbed more of the toxin than a person was able to excrete through exhalation. "Rates of absorption of carbon disulfide," the experiment found, "were about 10 times higher than rates calculated from lung excretion of carbon disulfide."

That's not good considering the [Center for Disease Control](#) says carbon disulfide targets the "central nervous system, peripheral nervous system, cardiovascular system, eyes, kidneys, liver, skin, reproductive system" and causes the symptoms of "dizziness, headache, poor sleep, lassitude (weakness, exhaustion), anxiety, anorexia, weight loss; psychosis; polyneuropathy; Parkinson-like syndrome; ocular changes; coronary heart disease; gastritis; kidney, liver injury; eye, skin burns; dermatitis; reproductive effects."

Carbon disulfide has been found at multiple Brandeis-Bardin seeps according to Boeing's report. That would include seep S-25/OS-8 which is approximately 800 feet south, as the crow flies, and uphill from the camp Directo-Meston stayed at in 2008.



Indeed, carbon disulfide was detected 35 times at S-25/OS-8 during a series of samplings and lab tests from 1985 to 2010. The industrial solvent and paint stripper, [carcinogenic methylene chloride](#), was identified 51 times and acetone 36 times. The VOC toluene, used in making paints, paint thinners, lacquers and adhesives, was found 46 times.

Carbon disulfide was detected 35 times at S-25/OS-8, methylene chloride 51 times, acetone 36 times and dozens of detections of toluene, perchlorate & TCE.

"Toluene may affect the nervous system," according to the [ATSDR](#). "Low to moderate levels can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, and loss of appetite."

Perchlorate was found all nine times it was tested for at S-25/OS-8 for two years during 1989 to 1991. The report gives no explanation why perchlorate testing ended when it continued for the other toxins until 2010. Boeing also gives no explanation as to why it stopped testing for the other lab-associated chemicals at this Brandeis-Bardin seep so impacted by SSFL toxins like trichloroethylene (TCE) in 2010.

Carcinogenic rocket engine solvent TCE was detected 50 times at Brandeis-Bardin's seep S-25/OS-8 including the last time it was tested for September 15, 2010. "Trichloroethylene is used as a solvent for cleaning metal parts," says the [ATSDR](#). "It is expected to remain in groundwater for long time since it is not able to evaporate."

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Section 3 – Public Comments and DOE Responses

Commenter No. 621 (cont'd): Michael Collins EnviroReporter.com

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TCE (trichloroethylene) tank in Area I of SSFL – Photo by William Preston Bowling

There's over 530,000 gallons of TCE in SSFLs groundwater. Von Braun's NASA conducted over 30,000 rocket engine tests over the decades at the lab. TCE was used to dissolve off carbon and other fining residues inside and outside the rocket engine. Until 1964, when it began to be recycled for economic reasons, NASA allowed TCE to sluice off into the soil after use. "More than 1.73 million gallons of TCE slopped onto Rocketdyme's ground," according to this reporter's 2003 expose [The Sins of Rocketdyme](#).

"If you live near such a facility or near a hazardous waste site containing trichloroethylene, you may also have higher exposure to this substance," ATSDR reports. "There is strong evidence that trichloroethylene can cause kidney cancer in people and some evidence for trichloroethylene-induced liver cancer and malignant lymphoma. Lifetime exposure to trichloroethylene resulted in increased liver cancer in mice and increased kidney cancer and testicular cancer in rats."

Those who hope cleanup of [SSFLs spreading TCE plumes](#) in the groundwater is possible soon shouldn't hold their breath. Before it was shut off in 2006, one water filtering system pumping at the lab managed to remove only 10 gallons of TCE per year. At that rate, it would take 53,000 years to remediate the water under the site.

By that time, the TCE plume may have moved under Brandeis-Bardin perhaps as far, and farther, than where the camp's religious, administrative and lodging buildings are located. As exposed in 2003's *Ventura County Reporter* article [Air Apparent](#), "TCE is 5 to 65 times more toxic than previously thought when inhaled." That does not portend well for any residents of some future development scheme over areas impacted by this deadly chemical. TCE vapors have concentrated in buildings, homes and schools across the United States in places where it has polluted the groundwater.

Too Many Crooks in the Kitchen?

Another way to get rid of the TCE is to claim it isn't there even when tests say that it is. This report is a case in point. When discussing seep OS-08 which tested positive for TCE fifty times, the report claims "TCE was not detected in the 48 other analyzed samples from this seep. These TCE detections are likely spurious."

"Likely spurious" is likely wishful thinking. Any report this long and detailed that shows the detections and then dismisses them with groundless and unexplained speculation is suspect in the extreme. It's also bad science.



Figure 12.08 Boeing Seeps Study Area

Boeing Seeps Study Area map excludes Meier Canyon to the northwest of the Northern Buffer Zone, the land Brandeis-Bardin Institute sold to Boeing as part of its contamination lawsuit confidential settlement.

The Boeing report does admit that the acetone found in seep S-19 was a common lab contaminant from SSFL. It's not the only time this admission is made.

"Methylene chloride is a common laboratory contaminant, and was detected once at a concentration equal to the PQL and just above the Cal MCL [Maximum Contaminant Level] for methylene chloride (5 µg/L)," the report says of a detection in Brandeis-Bardin seep S-29.

Since this toxin is regulated and exceeds its California MCL, it was a violation of the Clean Water Act as this is a 'blue line' stream course that supplies a drinking water source, in this case the utilized Simi Valley aquifer. *EnviroReporter.com* could find no evidence that this regulation violation was reported to the appropriate agency, in this case the LARWQCB.

Acetone and methylene chloride, each identified as a "common laboratory contaminant," were found in seep OS-08 before the report disclosed the readings of toluene which the Boeing report said "is a

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Commenter No. 621 (cont'd): Michael Collins
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component of fuels, adhesives, and other prevalent products, and thus is a common field and laboratory contaminant.”[sic]



Along with acetone, another toxin was detected at seep S-17 as well. “Ethylbenzene was detected in one of five analyzed samples,” the report reads. “Ethylbenzene is a component of fuels, adhesives, inks, paints, and other prevalent products, and thus is a common field and laboratory contaminant.”[sic]

That was page 74 out of 6,549. On page 118, however, it shows that ethylbenzene was detected five times, not just once. Page 155’s map of S-17 shows it to be about 1,100 feet south and uphill of the camp Directo-Meston stayed at in 2008. Current satellite imagery of Brandeis-Bardin shows that the [group camp area and hillside amphitheater](#) are still there at the site.

Seep S-17 had detections of acetone and ethylbenzene. The report says “Ethyl benzene is a component of fuels, adhesives, inks, paints, and other prevalent products, and thus is a common field and laboratory contaminant.”

Seep S-9 is likewise identified by the report as being impacted by SSFL acetone and methylene chloride. “John Varble (Ranch Manager of BB) reports that the pool has been continuously [sic] for the last 30 years,” the study says.



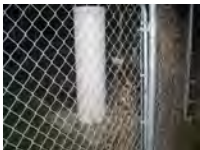
Seep S-9 has been around and running for at least 30 years according to the late John Varble, ranch manager for Brandeis-Bardin ever since James Arness donated his land in 1972.

Far from the coherency that comes from a major multi-year study that reaches its conclusions after looking carefully at its own data, the Boeing report cooks up this interpretation: “Contaminants have not been detected at off-site seeps and this could be due to multiple reasons including that the contaminants are not at the seep, but also the contaminants may be at the seep but non-detect due to a) loss due to surface volatilization or b) VOC dilution with water sourced from local flow paths.”

The report *itself* shows the off-site detections of contaminants. There are hundreds of hits over a significant area. Also, if there is a loss “due to surface volatilization” or “VOC dilution with water sourced from local flow paths,” it means the toxins had to be there in the first place. It also means that toxins came from SSFL because they *aren't* from “water sourced from local flow paths.” This Boeing report confirms what cleanup activists have been saying for decades; lab pollutants are migrating off of the Santa Susana Field Laboratory.

“Fission Products” and “Reactor Control Rods”

Typically the most damning contamination findings come in dense scientific reports that require a keen eye to find data related to Brandeis-Bardin if, that is, it exists at all. Another such report arrived January 20, 2016. The [239 page study](#) [36.98 MB] for the Department of Energy was called “Department of Energy (DOE) RCRA Facility Investigation Groundwater Work Plan Portions of Area IV under DOE Responsibility.”



A trio of Brandeis-Bardin wells called RD-59A, RD-59B and RD-59C has yielded some shocking results with Area IV’s nuclear contamination fingerprints. “The cluster is located below the escarpment with groundwater flow from the mountain resulting in a generally upward gradient,” the report says. “The heads of B and C are above the ground surface and result in flowing artesian conditions.”

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/1/>

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621-6
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621-11

621-11 Please see the response to comment 621-3. Tritium at 110 picocuries per liter reflects the background concentration for tritium at the time the sample was collected. Tin-126 and cadmium-113 have not been consistently (2 or more times) detected in the RD-59 wells, and therefore, may be false positives. In addition, the detection of Tin-126 (0.74 picocuries per liter) was well below the maximum contaminant level of 293 picocuries per liter. Nonetheless, as the commenter noted, monitor wells RD-59A and RD-59B were recommended for sampling because these radionuclides were detected previously and are possibly site related. Tin-126 and cadmium-113 have not been detected in these wells in more recent sampling (Report on Annual Groundwater Monitoring, 2016, SSFL, Ventura County, California. Boeing, February 27, 2017).

Commenter No. 621 (cont'd): Michael Collins EnviroReporter.com

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Well RD59B in 2005 in Brandeis-Bardin had "Tin-126 is a fission product and is possibly site process related," according to the DOE report

They also result in some extraordinary readings. RD-59A, monitored from 1989 to 2011, had a high for radioactive tritium with a reading of 110 picocuries per liter (pCi/L). "No SSFL operations occurred off-site,"

read the report before making an incredible leap of logic. "Tritium detection frequency and activity confirm that there are no tritium off-site sources. No future action is required for off-site wells."

Later in the report, RD-59A is recorded as having a filtered reading of Cadmium-113m of 9,700 pCi/L. The well is subsequently recommended for future sampling because "Cadmium-113m neutron activation of Cadmium-112 used in reactor control rods – possibly site process related." [Report emphasis] Presumably, "site process related" means that it came from SSFL activities.

RD-59B also directly tied Area IV's radiation contamination spreading offsite in Brandeis-Bardin's groundwater. The well tested positive for radioactive Tin-126. The report advocated continued testing of this well too. "Tin-126 is a fission product and is possibly site process related." [Report emphasis]



November 9, 2015 DOE report shows Brandeis-Bardin radiation related to nuclear control rods and fission products

Nothing says radioactive contamination more than finding a "possibly site process related" isotope directly related to nuclear reactors downhill from Area IV of the Santa Susana Field Laboratory. Yet nothing is what AJU has had to say about it. Either Brandeis-Bardin representatives had no clue of the findings or they did know these astonishing results and chose not to share them.

Neither explanation can account for the institution's howling of certainty that its property has not been impacted by SSFL by one iota. The information kept on coming, courtesy of the department supposedly in charge of the Rocketdyne cleanup, a government agency also apparently blind to the data that the DOE created.

New Toxic Fluoride Levels in Brandeis-Bardin Groundwater

DTSC sent EnviroReporter.com an email "DTSC-SSFL Document Upload Notification: SSFL NASA Area I LOX and Area II Groundwater Monitoring Report Third Quarter 2016" with a link to [the report](#) [1,180 PDF pages; 17.3 MB] November 30, 2016. "Monitoring wells RD-68A and RD-68B and seep well SP-29B are the only wells located offsite that were sampled during the third quarter 2016," the report says of these wells which are on Brandeis-Bardin property. "Fluoride was detected above the SSFL comparison level of 0.8 mg/L [milligrams per liter] at RD-68B and SP-29B at concentrations of 0.97 mg/L and 4.8 mg/L, respectively."

While fluoride might seem an innocuous chemical added to drinking water to fight cavities, or a threat to "precious bodily fluids" as comically suggested in *Dr. Strangelove*, it is hazardous at high levels.



Artesian well SP-29B's 4.8 milligrams/liter of water more than doubles California's MCL for the chemical. A reading of 4.2 mg/L in the same well in the 1st Quarter shows that the toxic level of fluoride in Brandeis-Bardin water has increased.

November 2016 NASA report shows levels of fluoride in Brandeis-Bardin artesian well SP-29B that exceed California Maximum Contaminant Level for it in drinking water

"Samples collected from SP-29B were submitted for radionuclide analysis during third quarter 2016," the NASA report added. "Nine individual radionuclides were detected, for which there are screening criteria for only five of these analytes (gross alpha, gross beta, gross beta-decanted, uranium-233/234, and uranium-238)."

Actual levels of the radiation weren't provided. The report also didn't list exactly what the other four radionuclides were or their amounts either.

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Commenter No. 621 (cont'd): Michael Collins

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Fluoride might seem an odd chemical to find at such high levels in Brandeis-Bardin gurgling out of its artesian water. Yet according to an April 14, 1983 Rockwell International memo obtained by EnviroReporter.com entitled "LETF Fluoride Incident, 3 March through 31 March 1983," contaminated water from the Bowl Area [R-1] and Perimeter Pond reservoirs at SSFL was sprayed on the surrounding area dirt to bring down the levels of fluoride.

"I originally proposed this spray disposal system during the mid summer fluoride incident of June 1981 to evaporate the large volume of contaminated water at R-1," wrote C. E. Winzer in the "Internal Letter" to L. D. Schmeid. "[C]ontinued spraying with fluoride reduction due to salt formation afforded the most suitable treatment process. Run-off from this spray was monitored daily for magnitude and reduction."



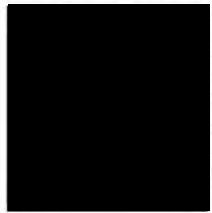
According to the US National Council on Research, toxic concentrations of fluoride in drinking water can lead to weakened bones and cause hip and wrist fractures. In [Fluoride in Drinking Water: A Scientific Review of EPA's Standards \(2006\)](#), the council said fractures occur at fluoride levels of 1 to 4 mg/L. Brandeis-Bardin's artesian levels of fluoride were found in excess of this in samples pulled twice in 2016. The hazards of fluoride at high levels has been known for decades. Clinically-significant renal dysfunction is possible with fluoride drinking water levels of 1 ppm according to "Metabolism and renal effect of enflurane in man" in the *Journal Anesthesiology* in 1976.

1983 Rockwell memo detailing the spraying of fluoride on surrounding areas to bring down toxic levels in the Perimeter Pond reservoir

AJU Jolts Jewish Journal

New information was provided [December 7, 2016 by the Jewish Journal](#) when it published a piece saying that some of Brandeis-Bardin's soil was going to be remediated by the Department of Energy. The DOE had found toxins at levels above background on camp property and were considering removal of the dirty dirt according to the story.

Jewish Journal had learned of the plan from part of a DTSC draft environmental impact report on the upcoming remediation of Area IV given to it by Santa Monica-based Consumer Watchdog. Accompanying the news article was correspondence between AJU and the paper, as well as an undated DOE list of contaminants it found in Brandeis-Bardin.



AJU sent a [scathing letter](#) to the publication telling the reporter that she had no story. "We are concerned and surprised that the *Jewish Journal* refuses to accept the science-based verdict of DTSC, supported by reams of test results and careful analysis, and instead insists upon perpetuating a harmful and false impression about the safety of our property," wrote Rabbi Jay Strear from the office of AJU's senior vice president November 28, 2016. "In doing so, the *Jewish Journal* does a disservice to us and to our community."

"In short, the samples show a soil profile that is not meaningfully different from what you would find if you sampled the average American front lawn," Strear wrote. "Since DTSC has stated explicitly that there is no risk to human health in these sample results or in any other data collected from BBC to date, it is difficult for me to understand how an article about a project description included in a preliminary administrative draft EIR [Environmental Impact Report] would provide any meaningful information to your readership. On the contrary, it could well serve to give further unfounded cause for concern."

621-3
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621-12

621-12 Please see the response to comment 621-3. The commenter makes several inappropriate comparisons of low concentrations of chemicals in soils with industrial and other comparison standards that have been set for elevated concentrations of chemicals. The IDLH concentrations cited apply to industrial work place settings. The comparison for dieldrin is in reference to recently applied pesticides, not pesticides applied years ago. The appropriate comparison to evaluate soil risk is to risk-based screening levels (RBSL) that take into account how exposure may occur in the natural environment. RBSLs have been established for use at SSFL and have been approved for use by California DTSC. For example, the RBSL for bis (2-ethylhexyl) phthalate is 173,000 ppb while the concentration in the NBZ was 64 ppb. The RBSL for endosulfan I is 412,000 ppb and the concentration observed was 0.92 ppb. The RBSL for selenium is 380 ppm and the concentration observed was 1.04 ppm. None of the chemicals observed in the samples exceeded their respective RBSLs. As described in Section 2.5, "Toxicity of Soil Contaminants" of this CRD, exceeding a background value does not necessarily mean that the constituent is present at dangerous levels. Subsequent to issuance of DOE's Draft EIS, DTSC issued a report that included consideration of the 2016 sampling, and concluded that the chemicals and radionuclides do not pose a risk to users of the Brandeis-Bardin property.

Section 3 - Public Comments and DOE Responses

3-1295

Commenter No. 621 (cont'd): Michael Collins
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Strear may have not known that the significance of the data he included with his missive to Jewish Journal. It had a [list of Brandeis-Bardin contaminants](#) found above Area IV background levels with their exact Brandeis-Bardin measurements. Assuming the veracity of the document, the DOE was likely investigating contamination pathways as part of its AOC-related investigation into the extent of its toxins in soil. DOE representatives have stated publicly that if Area IV contamination was found offsite, it would clean it up. It seems the draft EIR indicates it will do just that which would be good news if AJU welcomed it and the resultant cleanup. Plus, it would cost the camp nothing.

Read more at [BRANDEIS-BARDIN'S TOXIC DENIAL INVESTIGATION](#)

Photos, videos, reports, figures, tests, data and special analysis of 2015 Boeing Report Brandeis-Bardin Seeps and 2016 DOE-AJU Summary Brandeis-Bardin Soils

NASA has an identical AOC with DTSC. Both AOCs include soil and groundwater. Any contamination emanating from SSFL down drainages adjacent the site is supposed to be remediated as well hence why the DOE followed the contamination down into Brandeis-Bardin when it made its discoveries. All of the excess radiation and chemicals have to go if the cleanup is to be complete and leave such offsite locations safe for future generations.

Strear's DOE list of contaminants showed background threshold values multiple times their Area IV BTVs. The test results, called "Drainages from Area IV onto Brandeis Property Soil Data Summary Soil Samples Exceeding DTSC Look-Up Table Values," has written on it in red ink "none are SSFL related" with no explanation how that could be.



That the Jewish Journal would publish a summary that makes the unlikely assertion that none of the chemicals tested high are related to Area IV with no analysis would seem puzzling were it not for another strange turn of events when the article was published. The title of the piece, "Remote Brandeis-Bardin area may need cleanup," was amended within hours of going on the Jewish Journal website to "Remote Brandeis-Bardin area may need cleanup, no health threat seen." Then the headline went under a third revision with "Remote Brandeis-Bardin area may need cleanup, state officials see no health threat."

No explanation was given for the addition of "no health threat seen" and then that the state doesn't see one either. Yet it was, literally, correct. DTSC has always said there is no health threat so it doesn't see it. Jewish Journal didn't see a health threat either because it apparently didn't analyze DOE's numbers. If it had, it would have found what EnviroReporter.com did by simply cross-checking them with their publicly available BTVs.

Telling the Toxins

The DOE's sampling test results in Brandeis-Bardin are stunning. No less than 22 chemicals are higher than their SSFL background readings requiring a comprehensive EnviroReporter.com analysis of Brandeis-Bardin contamination found by DOE. That examination is called [2016 DOE-AJU Summary Brandeis-Bardin Soils](#).

Among the standouts, the heavy metal antimony registered three times its Area IV BTV in Brandeis-Bardin. Found in at least 403 of 1,416 of the EPA's National Priorities List of hazardous waste sites nationwide, antimony can be dangerous. "In long-term studies, animals that breathed very low levels of antimony had eye irritation, hair loss, lung damage, and heart problems," [according to ATSDR](#).

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Brandeis-Bardin 3-2-08 Exploring in Brandeis-Bardin – Photo by Danielle D

Heavy metal molybdenum, "widely used to add strength and hardness and retard corrosion in metal alloys" according to the [Centers for Disease Control and Prevention](#) (CDC), registered 5.8 times its BTV.

Another heavy metal, selenium, came in at 1.8 times its Area IV background. The amount of selenium found in Brandeis-Bardin was between 11.6 to 20.8 times the Earth's average concentrations suggesting a man-made source.

"People may be exposed to higher-than-normal levels of selenium at hazardous waste sites by swallowing soil or water, or by breathing dust," says [ATSDR](#). "The way that selenium can enter the body from a particular site depends on such factors as whether vegetables are

grown in soil in which selenium from the site has been deposited, whether water at the site contains selenium and is able to flow into drinking water supplies, and whether selenium dust blows into the air."

Several PAHs were detected above their BTVs in Brandeis-Bardin drainages down into the camp as well. "People living near waste sites containing PAHs may be exposed through contact with contaminated air, water, and soil," reports [ATSDR](#). "Studies of people show that individuals exposed by breathing or skin contact for long periods to mixtures that contain PAHs and other compounds can also develop cancer."

The PAH naphthalene registered a substantial 5.4 times its SSFL BTV. "Naphthalene has caused cancer in animals," according to [ATSDR](#). "Naphthalene can become weakly attached to soil or pass through soil into underground water."

Another detected PAH, bis(2-Ethylhexyl)phthalate, is "Reasonably Anticipated to be a Human Carcinogen" by the [CDC](#). The Brandeis-Bardin sample was 58% higher than its BTV. The colorless liquid with nearly no odor is used in sheathing for wire and cable and to make plastics flexible.



Brandeis-Bardin 3-2-08 Danielle Directa-Motion by Brandeis-Bardin pond – Photo by Danielle D

The PAH fluorine was detected at 5.7 times its BTV. It is described by the [CDC](#) as a "Pale-yellow to greenish gas with a pungent, irritating odor," and is listed under "Immediately Dangerous to Life or Health Concentrations (IDLH)." Used as a chemical intermediate in a wide range of industrial uses, fluorine is sourced to formulate polyradicals for resins.

A wide range of herbicides and pesticides were used at Rocketdyne, many more than you would find on a typical lawn. That explains why the Area IV chemical background study identified so many and determined their BTVs. It might also explain how so much of these poisons ended up being detected by the short DOE report given by AJU to Jewish Journal then made public and analyzed by EnviroReporter.com. No less than a dozen of these substances exceeded their Area IV BTVs.

The insecticide Endosulfan I in Brandeis-Bardin measured a considerable 8.6 times its BTV. "How might I be exposed to endosulfan?" asks [ATSDR](#) in its [ToxFAQs for Endosulfan](#) page. "Touching contaminated soil or fruits or plants that have been sprayed with endosulfan will result in a small amount entering the body through the skin."

Dieldrin is an insecticide that was banned for all uses by the EPA in 1987 yet is still found in Brandeis-Bardin dirt tested by the DOE at 3.1 times its background threshold value. "[D]ieldrin build up in the body after years of exposure and can affect the nervous system," says [ATSDR](#). "In animals, oral exposure to lower levels for a long period also affected the liver and decreased their ability to

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fight infections. We do not know whether aldrin or dieldrin affect the ability of people to fight disease.”



Brandeis-Bardin 3-2-08 Gabe Goldman is the man holding the hay bales – Photo by Daniela D.

The pesticide Gamma BHC, also known as Lindane, registered 4.7 times higher at Brandeis-Bardin than its Area IV BTV. “The substance can be absorbed into the body by inhalation through the skin and by ingestion,” according to CDC. “The substance may have effects on the liver. Tumours have been detected in experimental animals but may not be relevant to humans.”

What is relevant to humans, at least the ones visiting, working, camping and living at Brandeis-Bardin is that Rabbi Strear and American Jewish University had already claimed “that there is no risk to human health in these sample results or in any other data collected

from BBC to date.” Results from decades ago all the way through December 2016 from EPA, DOE, NASA and EnviroReporter.com may speak a very different story. Regardless of all these data showing toxic problems oozing from SSFL, the Obama Administration’s Department of Energy parting shot made clear in the first week of 2017 that it didn’t want any cleanup of Area IV at all.

Pollution Solution

DOE’s public policy line was different three years prior. “Let’s clean up to background,” said John Jones, federal project director for the DOE in Area IV, before a meeting of the SSFL Workgroup February 5, 2014. Jones told the audience that the agency was committed to the AOC it signed because, quoting another DOE official, “At the end of the day...it’s the right thing to do.”

Jones’ words were well received. Indeed over 3,700 public comments had been submitted in support of the AOC with only a handful opposed. Soon after, Jones wasn’t so vocal. KNBC’s Joel Grover filmed Jones refusing to speak with him at an SSFL-related meeting in 2015.

That silence ended January 6, 2017 with the DOE releasing its [Draft Environmental Impact Statement \(DEIS\)](#) which will determine what will actually happen with the cleanup of Area IV of SSFL and the Northern Buffer Zone. Three years overdue, there is no mention of Brandeis-Bardin contamination in all of the DEIS’s 27 reports totally 1,468 pages.



3-18-17 Department of Energy DEIS meeting in Simi Valley where majority of public commenters demanded DOE stick to its agreement and clean up SSFL to background levels of radiation and chemicals

There is analysis of three options for cleanup that drastically allow more radiation and chemicals than DOE’s AOC allows. The first option would leave up to 39 percent of dirty dirt in place, the second allowing 91 percent of the soil not cleaned up and the third possibility leaves up to an amazing 99 percent of the known contaminated land not remediated.

Community outrage was evident February 18 when the DOE held the first of two public meetings to take public comment. “You promised six years ago you would clean up the mess you made so that it would be like you never made it in the first place,” said Devyn Gortner of Teens Against Toxins at DOE’s meeting in Simi Valley. “The community has debunked every single one of your excuses as to why you cannot keep this promise.”

A little girl named Grace spoke at the Van Nuys meeting February 21, riveting the audience of around 100 people. “I had cancer,” Grace said referring to a rare form of the disease that her mother, [Melissa Bumstead](#), blamed on SSFL toxins. Bumstead’s [Pediatric Cancer Greater Los Angeles map](#) shows a sobering number of cases surrounding SSFL. “I want to help our city get all the love it needs by getting rid of all the chemicals and nuclear waste because we don’t want to have to do this

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/>

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621-13 Please see the response to comment 621-3. Chapter 3, Sections 3.1.1 and 3.5.1, of this EIS note that the American Jewish University – Brandeis Bardin is located directly north of SSFL. The EIS, however, does not directly address the history of environmental media sampling and cleanup activities that were undertaken on the American Jewish University property. Information about these activities is available at http://www.etec.energy.gov/Environmental_and_Health/Brandeis_Bardin.html).

Commenter No. 621 (cont'd): Michael Collins
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2-21-17 Little girl and cancer survivor Grace asks DOE to clean up SSFL at Van Nuys public meeting.

again. I don't want to live close to chemicals in the mountain."

"My daughter was diagnosed, recently, with leukemia, a rare form called APL, which the doctors said it was directly related to an environmental issue," said West Hills resident Mark Dow before the DOE panel in Simi Valley which included John Jones. A husband and father of two, Dow has lived about a mile from SSFL since 1996. "Our neighborhood has also had other cancers. We've had two children with brain cancer. We've had an adult die from brain cancer. We've also had two other cancers within our block. So when people say there is no direct correlation [to SSFL], I

have to object."

"We were there when the fires burned [2005] at that site and I could see the ashes coming into my yard and they looked extremely strange," Dow continued. "They weren't typical ashes and you could see it was muddy, gluey, particles coming into our neighborhood and it was appalling."

Though much fewer in number, people against full cleanup of SSFL spoke out too. One was Nancy Kidd, an archeologist who said at a DTSC meeting in 2013 that excavating "any dirt" at SSFL would result in Valley Fever region-wide. Kidd's choice of words and their emphasis, repeated here in their entirety, shocked some in the crowd who knew their Holocaust history.

"It's really heartbreaking to hear these stories and to hear these consternation over all of the years and people having so much invested in the sadness of some kinds of activities that occurred many many many years ago," Kidd said at an audience microphone. "I am with the Simi Valley Historical Society and, in November, we are actually hoping to celebrate Santa Susana Field Laboratory for the rocket engine testing not for your contamination issues. We are hoping that you can remember perhaps through the years and through the grief that the rocket engines that were born in flame and glory up there put our nation at the forefront of the space program and it was our proudest achievement in our history. We are hoping you can see that part of the Santa Susana Field Laboratory and join us. And we are sorry that it has been such a contentious issue for so very long and we hope too that all of this can find a final solution."



Nancy Kidd at 4-29-15 DTSC meeting.

The crowd gasped at the hopefully inadvertent use of a term more appropriate to a Nazi like SS-Sturmbannführer (Major) Wernher von Braun back when he was an Adolf Hitler favorite. As outrageous as Kidd may have sounded, DOE's conclusion that all this fuss about radiation and chemicals is specious may sound even worse. The department makes it abundantly clear that it doesn't think there is anything to worry about, sound science be damned.

"Because there is little difference between those risks, there would also be little difference between the risks following cleanup under any of the soil remediation alternatives—risks in all cases would be close to those from exposure to background soil," the DOE report reads suggesting there's no need for any cleanup at all.

If this unlikely scenario were true, why was \$41.5 million spent finding the radiation and chemical pollution in Area IV in the first place if the pollutant was only going to wave away any need for remediation? Has the U.S. taxpayer been deceived and defrauded for tens of millions of dollars in addition to the exposure of the public to DOE's poisons?

Not only does DOE boldly blind itself to all the foulness EPA found and figured the background levels for, it seems equally unable to comprehend that the department cannot unilaterally nix the cleanup.

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621-14 DOE places a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities. In response to comments on the Draft EIS, the risk assessments have been revised for a better comparison of the site risks to background and expanded to include quantitative risks for both onsite and offsite exposures for all alternatives. In this Final EIS, DOE revised the Conservation of Natural Resources Alternative to include two scenarios. The first scenario reflects cleanup levels based on a suburban resident without a garden as was done in the Draft EIS. The second scenario establishes cleanup levels based primarily on a recreational user, with some constituents being further limited by ecological risk. In response to comments on the Draft EIS, DOE has added an offsite human health risk assessment by modeling of potential releases of wind-blown dust to an offsite suburban resident receptor during remediation for all alternatives. This analysis includes the indirect garden pathway, in recognition that local residents may get some portion of their food from a home garden. The results of the human health risk analysis are included in Chapter 4, Section 4.9, of this Final EIS. The results of the ecological risk assessment are included in Section 4.5.

Commenter No. 621 (cont'd): Michael Collins

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2-21-17 Mark Dow at DOE Van Nuys meeting. "My daughter was diagnosed, recently, with leukemia, a rare form called APL, which the doctors said it was directly related to an environmental issue," Dow said. "Our neighborhood has also had other cancers. We've had two children with brain cancer. We've had an adult die from brain cancer."

The AOC it signed in 2010 to clean up to background radiation and chemicals is a legally binding document. The AOCs for both the DOE and NASA make it explicitly clear that DTSC will determine cleanup decisions for both chemicals and radiation in the SSFL cleanup.

While the DOE states at the beginning of the draft EIS report that "DOE has no preferred alternative at this time," it's clear that the department does have a preference, and that is doing as little cleanup as possible. "The negative incremental risks calculated for the No Action Alternative imply that the concentrations of chemical and radionuclides in soil from site-related activities are less than the variability of background concentrations of those chemicals and radionuclides. Therefore, the risk of cancer incidence or death from chemicals and/or radionuclides in Area IV and the NBZ are comparable to or less than the risk determined for background soils."

It goes without saying that if the DOE manages to get marching orders to do nothing in Area IV and the NBZ, nothing they will do. That leaves any possible contamination at Brandeis-Bardin, and its obvious source, left there forever. Nothing would please the polluters and their like-minded pals in the Trump Administration more.

The prospect of eternal pollution being the solution did not please the Ventura County Board of Supervisors in whose county the lab sits. At a March 7 meeting, the board made their unhappiness with the DOE clear with a 4-0 vote demanding adherence to the AOC. "Unfortunately, the EIS does not analyze cleaning the DOE site to the agreed upon stipulations in the 2010 Agreement on Consent," the board's letter to the DOE states. "Instead, hundreds of thousands of cubic yards of soil, some with known significant chemical and radiological contamination that would be covered by the AOC, are exempted from remediation."

"They have not done an analysis of cleaning up to background," Supervisor Linda Parks said of the DOE at the board meeting, "something that they have a legal binding agreement to do so. If you look at the document, they have excluded somewhere in the neighborhood of 300,000 cubic feet to half a million cubic feet of soil from even the consideration of remediation." Supervisor Steve Bennett concurred adding, "[I]t's backsliding after all of this work and all of these agreements ... is not appropriate or good government policy in terms of following through on commitments."

The Los Angeles City Council then voted to pressure the DOE to adhere to the AOC with a 12-1 vote March 8. A week later on March 14, Los Angeles County supervisors Sheila Kuehl and Kathryn Barger led a unanimous board vote demanding total cleanup of the old Atomics International site and SSFL. Kuehl, a longtime leader in the fight to clean up Rocketdyne, minced no words.



Los Angeles Supervisor Sheila Kuehl has long been a leader in the fight to fully clean up the Santa Susana Field Laboratory to background levels of toxins.

"This site has been a little unusual, actually, even compared to our other toxic sites in the county, because the federal government is so implicit in keeping this a dirty site and keeping it from being cleaned up, in not just dragging their heels, but in creating documents that lowball the danger, that lowball the health effects," Kuehl declared to a room packed with appreciative pro-cleanup supporters. "Well, I believe in a cancer cluster when I see one, and I know what's going on in these neighborhoods and what has been. If you see the film that was made about this site, and you see the workers given plastic aprons to go in and clean up a nuclear meltdown, or you see them shooting rifles at barrels of radioactive materials to set them on fire, and you watch this radiated material rising up into the air and spreading over miles of this area, and you think, well, you know, in

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/1/>

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Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

4/10/2017

Brandeis-Bardin's Toxic Denial - EnviroReporter.com

the old days, they would claim, 'Oh we didn't know what we were doing, or we did and we didn't care.' But to say in the 21st Century 'we know and we don't care' is really inexcusable."

Toxic Test Stands

Then an anti-cleanup bolt out of the goo struck that would effectively relieve NASA of the majority its huge cleanup burden in its areas of responsibility at SSFL. Republican congressman Steve Knight (CA-25) sent a bipartisan letter to the acting head of NASA March 21 asking for the remaining rocket test stands at Rocketdyne not be demolished because of their "historical significance."

"We understand the need to complete the cleanup of toxic chemicals in the area from the many years of research and testing. However, the environmental protection mission and the preservation of such an important piece of our shared history are not mutually exclusive goals," Knight and his co-signers stated in the letter. "It would be a tragedy to lose these test stands and deny future generations the ability to connect with this history and humanity's ongoing search for a better understanding of our universe."



COCA Test Area in 2007 is in decrepit condition with lead paint covering the structure and massive amounts of TOE and perchlorate saturated into the dirt and groundwater around the stand which would remain if the decaying behemoth were "saved" resulting in no cleanup.

Nancy Kidd couldn't have put it better. But what could really be a tragedy is if the test stands remained because it is underneath and around them where the most contamination on NASA property remains unremediated. Two of the most important and prevalent chemicals of concern are perchlorate and TCE which, as this investigation shows, have migrated from NASA property into Brandeis-Bardin.

Despite highfalutin rhetoric to the contrary, leaving the test stands in place means leaving the pollution which would make any chance of eventually cleaning up Brandeis-Bardin virtually impossible. The proposal conveniently also leaves out how to pay for restoring the test stands which are covered in peeling lead paint, according to NASA, as well as how to secure and insure them since the public would presumably be in their proximity. Nowhere does Knight suggest where the substantial funds needed for what could be called [Glow in the Dark Park](#) would come from.

What is also left out of the anti-EPA arch conservative congressman's flowery pitch is any mention of the Nazi origins of SSFL or its impacts environmentally on the surrounding communities including the large Jewish camp downhill from contaminated NASA land and groundwater. This isn't surprising coming from Knight who is against federal regulation of greenhouse gas emissions and who voted with just two other California legislators to allow the display and sale of Confederate flag images in California state museums and gift shops in 2014.

What is surprising is that he got a handful of congress members who have previously supported the cleanup to co-sign [the letter](#). Most dismaying to cleanup advocates is Congresswoman Julia Brownley (CA-26) signing on to Knight's letter even though she has long advocated for the full cleanup of SSFL to background.

On a historic level, the dilapidated SSFL test sites do not rank with the many test stands at Cape Canaveral, Florida, where this reporter lived as a child growing up to love their grandeur and significance to space exploration. Indeed, the most historically noteworthy SSFL rocket test stands, the V-2 rocket ones brought to the new lab after World War II in Nazi swastika-embazoned boxes and reassembled, have already been removed.

Toxic Denial

A re-imagining of SSFL's toxic past and present took place March 29 at a meeting of the DOE-funded SSFL Community Advisory Group (CAG), a group exposed as a 'greenwashing' and 'astroturf' front in

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621-15

621-15 Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL for which it is responsible, Area IV and the NBZ. NASA cleanup activities are only considered as part of cumulative impacts (Chapter 5). Cleanup of the entire SSFL, including Boeing, NASA, and DOE activities, is being evaluated in the DTSC Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (a draft of which was issued by DTSC in 2017 [DTSC 2017b]).

621-16 While the comment is not on the scope or content of this Final EIS the following information is being provided.

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013. DOE does not control information distributed by those it has funded, including not only the CAG, but also the SSFL Advisory Board, SSFL Work Group, Committee to Bridge the Gap, Physicians for Social Responsibility, Rocketdyne Cleanup Coalition, and Teens against Toxins. The CAG was not secretly funded; DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards. Information on the SSFL CAG grant can be found here: <http://go.usa.gov/xWppte>.

621-16

Section 3 - Public Comments and DOE Responses

Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

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2012 in [Greenwashing Rocketdyme](#). The sparsely attended meeting took place at the Shomrei Torah Synagogue in West Hills.

The DOE is actively working against its own AOC agreement to clean up Area IV and its environs to background as first revealed in [Dept. of Energy secretly funding front group to sabotage its own Santa Susana Field Lab cleanup](#) in September 2016. That front group is the CAG, a DTSD-approved attempted replacement of the [SSFL Work Group](#) against the majority of the extensive community's wishes.

One of the 18 people in the audience in a room seating over 150 was CAG Member Ross Berman, a former employee of SSFL contractors CH2M Hill and Tetra Tech, who was handing out packets of information. Another was William Preston Bowling who taped and took photographs of the public event that he shared with [EnviroReporter.com](#).



3-29-17 SSFL CAG at Shomrei Torah Synagogue

"Is that the rabbi [Rabbi Jay Streat] from Brandeis?" Bowling wrote in an e-mail to [EnviroReporter.com](#) during the event. "I say it is. Maybe he dropped off the Brandeis document or asked the CAG to pass it out."

The four pager purportedly from AJJU is called "Fact Sheet - Brandeis-Bardin and the Santa Susana Field Laboratory" and makes the strongest claims yet that there has been no impact at all to its property from SSFL. Some of the claims, however, don't seem rooted in the actual facts. This is ironic because in its zeal to discredit and intimidate TV reporter Joel Grover, AJJU tried to pull scientific rank on the longtime award-winning investigative journalist.

"Mr. Grover's so-called investigation is an undifferentiated 'the sky is falling' tale - the kind of spectacular story intended to draw attention with little attention to actual facts," wrote AJJU's communications and marketing VP Joanna Gerber May 4, 2016. "The complex nature of the scientific findings appears to have eluded your writers and your editors."

Perhaps it has eluded AJJU that its "fact sheet" handed out at the CAG meeting made claims that are not supported by the facts. In fact, the evidence comes from the fact sheet itself.

"Environmental conditions on the Brandeis Bardin Campus have been studied extensively since 1991 by federal and state environmental agencies, as well as independent third-party engineers," the AJJU fact sheet states. "During that time, hundreds of soil, sediment, surface water, groundwater, and vegetation samples taken from the BBC have been analyzed. In 2016, an additional test - known as a gamma survey-was conducted on the main camp area and in the southern ravines. At no point in time have these tests shown any evidence of contaminant migration from SSFL."



SSFL Area IV Outfall 6 diamo over rocks into Brandeis-Bardin

This exposé has shown hundreds of detections of "contaminant migration" from the former Rocketdyne facility as confirmed by Boeing, Rockwell International, DOE, NASA and [EnviroReporter.com](#). These are evidence of SSFL contaminants just as the polluter itself admitted repeatedly, then denied, in its massive 2015 seeps report.

Yet AJJU's fact sheet claims that from 1991 on, there has been no evidence that SSFL goo got onto its property. If this AJJU statement were true, wouldn't it mean that the action Brandeis-Bardin brought against

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Commenter No. 621 (cont'd): Michael Collins
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Rockwell in 1995 and settled with Boeing in 1997 confidentially for \$3.2 million shouldn't have happened? If there was no contamination, why did Brandeis-Bardin sue over it? Why did Boeing pay Brandeis-Bardin millions to settle?

AJU has made no typo here as this claim is repeated. "In 1991, a rigorous testing program began at BBI to determine whether contamination at the SSFL had migrated to the BBI property," says the fact sheet. "The results of those tests consistently show no migration from SSFL to the Brandeis Bardin property."

The claim is repeated yet again this time citing AJU's Tetra Tech report. "Tetra Tech found no evidence of contaminant migration from the SSFL," reads the AJU fact sheet. Indeed, AJU's shaky claims flow into leaky descriptions of how there is no way SSFL's toxins can even get to Brandeis-Bardin property.

"Since 2010, storm water runoff from SSFL is primarily diverted away from Brandeis Bardin," the paper claims. "Storm water diversions have been constructed on the SSFL to prevent the flow of runoff from the SSFL on or toward the BBC."

"It's not diverted away, yet in places they [Boeing and/or its subcontractors] have created bioswales to hold storm water runoff in place from Area I in the northern drainage, and there are some BMP [Best Management Practice] work before and after the outfalls in Area IV that connect to AJU," said Bowling in an email after the CAG meeting. "The camp has been dealing with Rocket-Goo since the 1940s as per the letters produced in the NBC expose."

[Satellite imagery from 2017](#) shows that Area IV outfalls for surface runoff, like [outfalls 5 & 6 in 2008](#), are still in operation. Boeing's 2015 seeps report has a map of them on page 95 of its massive report. These SSFL outfalls above Brandeis-Bardin slow the effluent's flow during rain events, allowing it to soak in onsite and churning the water to encourage VOC evaporation. What soaks in makes its way into the groundwater which then squirts out in seeps below as a Boeing illustration in the report shows.



SSFL Area IV Outfall 5 bottom of drain into Brandeis-Bardin

But that's about it even though AJU claims otherwise. "What is released onto BBC is first processed to drinking water standards."

If the water flowing off of Area IV met drinking water standards, why would AJU feel compelled to have maintained signs in Meier Canyon that said "WARNING DO NOT DRINK OR USE THIS WATER"? And why would AJU's fact sheet make the conclusion that "Decades of testing have shown no evidence of contaminant migration from SSFL to BBC" when even Boeing says as much in its seeps report?



John Luker 2-18-17 DOE DEIS meeting Semi Valley

The facts continued their holiday at the SSFL CAG meeting. "I mean what could possibly mitigate removing something that's on the National Register, like a sacred cave or a test stand that got us to the moon?" anti-cleanup CAG member [John Luker](#) asked the small crowd knowing full well that the sacred Chumash cave won't be touched in any cleanup scenario. "How do you mitigate the removal of those things? That question has remained unanswered for twelve years."

That's because the question hasn't been asked because it is senseless and Luker knows it. The former Venice Beach juggler has repeatedly tossed out these cock-and-bull stories since he first started collaborating on the scheme to greenwash SSFL with former Los Angeles Times reporter and Boeing hired gun Gary Polakovic as exposed in [Boeing's Meltdown Makeover](#) in 2012.

<http://www.enviroreporter.com/2017/04/brandeis-bardins-toxic-denial/all/>

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Commenter No. 621 (cont'd): Michael Collins EnviroReporter.com

4/10/2017

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Bonnie Klea, long reknowned as [The Atomic Avenger](#), knows Luker quite well. Klea, recently [profiled by the Los Angeles Daily News](#), has been on the receiving end of his belittling remarks for years. Recently, she was named the 2017 Pioneer Woman of the Year by Los Angeles Councilmember Mitchell Englander for "her exceptional work advocating for those affected by the Santa Susana Field Lab during the partial meltdown of a sodium reactor occurred in 1959 at the site." [sic]

"We have a cancer cluster of little kids," Klea said during the CAG meeting after yet another presentation claiming no one has been effected by SSFL poisons. "We are on the second cancer cluster. The first one was in 2006. Those babies were born with retinoblastoma. Now we have 70 little children surrounding Santa Susana and they have extremely rare cancers. Maybe there's one in a million in America and we have more than one. Seventy kids."



Councilmember Mitchell Englander awards Bonnie Klea Pioneer Woman of the Year 2017 for her SSFL work

"If there was the remotest chance that there actually is cancer, somebody's got to start doing some soil testing because the contamination is not at SSFL," Luker said without the slightest trace of irony. "So we have to start looking at, maybe, school yards, public parks where we could do the testing and sampling and see if there's anything there."

Look anywhere but where there is dirt so hot that it is over a [thousand times background](#). DOE's Area IV sitting high above the Jewish camp. That kind of nonsense might work for people new to the issue but it doesn't fly with folks who've fought for full cleanup of the hot zone for decades.

Now or Never Again

Talking with a DOE official at the February 18 EIS meeting in Simi Valley, this reporter asked that if Area IV contaminants were found in Brandeis-Bardin above background, would DOE remove them per the AOC. DOE's project manager for Area IV, John Wondollock, said yes "in terms of anything that migrated from [Area IV]" before a DOE person intervened and offered an on the spot interview with DOE's John Jones.



DOE's John Jones 2-18-17 at Simi Valley DEIS public meeting during exclusive EnviroReporter.com interview.

"What we have discovered in the drainages are extremely low levels of pesticides and herbicides that are in the drainages leaving Area IV into Brandeis," Jones told EnviroReporter.com in a room adjacent DOE's public display describing the DEIS. "They are in no way near a threat to human health and, at this point, our range for what we have for the volume does not include going to Brandeis because at this stage this an informational document. This is not a decisional document so it would be inappropriate to say 'we're going to go here and do this' when we first have to talk to the private owners as well as we have to develop our final EIS and our record of decision is a decision document."

SSFL's DTSC project manager Mark Malnowski has repeatedly stated that if any contamination was found in Brandeis-Bardin related to Rocketdyne, DTSC would ensure that the responsible parties would be obliged to clean it up to background. In this case, NASA and the DOE would be those parties. These assurances were made last year in DTSC's April 12, 2016 presentation, and again in its December 22, 2016 letter to state Assemblymember Matt Dababneh (D-Van Nuys), where DTSC director Barbara Lee wrote, "I would like to emphasize that, if contaminants were detected at concentrations that posed an imminent threat to human health or the environment at Brandeis-Bardin Campus, DTSC would have issued an order for an immediate cleanup."

621-10
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621-17

621-17 Please see the responses to comments 621-3, -5, -6, -8, -9, -11, and -12. Comments on DTSC's responsibilities are outside the scope of this EIS.

Commenter No. 621 (cont'd): Michael Collins
EnviroReporter.com

4/10/2017

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Considering that there has been no comprehensive examination until this expose of what the contamination and remediation challenges are, the public now has the knowledge to determine what it wants done at SSFL and Brandeis-Bardin. The public can [comment on DOE's Draft EIS](#) by April 13, 2017.

"These environmental outrages shouldn't be allowed," says Bowling. "Now that the red hot spotlight of truth backed by proof is shining on Brandeis-Bardin, it's time for action. The place has to be cleaned up to background levels of radiation and chemicals just like SSFL must be according to law."



William Preston Bowling, right, praising SSFL takes outside lab gates with Michael "Mikey" Rincon August 6, 2016.

While the sordid history of this place suggests that the worst will indeed continue to pass, the information unearthed here, in over thirteen years of digging, will nevertheless warn the unwary of what secrets lie in and around the Santa Susana Field Laboratory. People that make the Simi Hills their playground, destination or home deserve to know what risks await.

Read more at [BRANDEIS-BARDIN'S TOXIC DENIAL INVESTIGATION](#)

Photos, videos, reports, figures, tests, data and special analysis of 2015 Boeing Report Brandeis-Bardin Seeps and 2016 DOE-AJU Summary Brandeis-Bardin Soils



**Brandeis-Bardin's
Toxic Denial
INVESTIGATION**

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Commenter No. 621 (cont'd): Michael Collins
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LEAVE A COMMENT

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3 COMMENTS

Kendrick Ng

April 8, 2017 at 8:07 pm | Edit

Putting the best possible spin on it, perhaps the good folks at Brandeis-Bardin Institute were simply unaware of the extent to which the toxic SSFL run-off could pollute their land. But now, Collins has documented it. BBI cannot blow this off, the health of way too many people is at stake.

Dale

April 7, 2017 at 11:46 pm | Edit

A very complete and worrying description of contamination problems associated with SSFL and nearby lands. I would be concerned about residents and visitors who unknowingly come into contact with the airborne and waterborne effluent leaching from the hills and watersheds surrounding SSFL. Although the story mentions some warning signs on the Brandeis-Bardin property, I wonder if publicly accessible hiking trails in the area are similarly marked. And, of course, one wonders just how far the contaminants could migrate from the SSFL property. The very long half-life radionuclides could seep into groundwater supplies if given enough time. I lived within earshot of the SSFL Saturn IVB engine tests of the 1960s. But at the time, I had no idea of the trouble that would develop years later due to the research activities at SSFL. I hope that articles like this one will stir action within the community and from local governments to bring closure to the SSFL cleanup project. Thank you, Michael Collins, for writing this important investigative article.

Another Simi Mom

April 8, 2017 at 10:05 pm | Edit

To Michael Collins: I am beyond impressed with your very clear organization and explanation of many years of test results relating to the Brandeis-Bardin Institute's property, and the implication that the parties involved don't want to admit the degree of contamination that the tests show. To the community of "Rocketdyne clean up activists" and visitor/camper/employees at Brandeis-Bardin Institute who may react to this EnviroReporter report with a question or a plea to the current decision makers for Brandeis-Bardin Institute "Why don't you do something to make the clean-up of

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Commenter No. 621 (cont'd): Michael Collins
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4/10/2017

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toxic and radioactive contamination happen" I hope to provide an answer as to why they most likely won't.

The reason "they won't do something" is in large part because the Board of Directors of American Jewish University, as the parent non-profit company to the non-profit owner of the Brandeis-Bardin property, are bound to a 1997 "Settlement and Release Agreement" between Boeing North America and Brandeis-Bardin Institute.

In essence, back in 1997 Brandeis-Bardin Institute's decision makers decided release all of their past and future claims against Rocketdyne/Boeing and to put their faith in Federal, California and regional toxics regulatory agencies to "do the right thing" and decide upon the details of further clean-up of hazardous substances and radioactive substances on, under and near the Brandeis-Bardin Institute's property.

Assuming that back in 1997 the Brandeis-Bardin Institute's decision makers expectation was that the government agencies WOULD require additional soil and ground water clean-up by Boeing on and around Brandeis-Bardin Institute's land, the sad fact is that 20 years later little has been done in terms of remediation improving the conditions of the Brandeis-Bardin Institute's land or the Boeing land directly upstream from it or adjacent to it.

Assuming that back in 1997 the Brandeis-Bardin Institute's decision makers expectation was that the government agencies WOULD require additional soil and ground water clean-up, the Settlement and Release Agreement they entered into with Boeing prevents Brandeis-Bardin Institute or its successor land owner from prosecuting any lawsuits NOW to try to force any such remediation.

One might say that given the wording of the Settlement and Release Agreement entered into by Brandeis-Bardin Institute in 1997, they shot themselves in the foot.

Back in 2015, when NBC Los Angeles was running its investigative news stories about Rocketdyne related contamination of Brandeis-Bardin Institute, NBC LA posted documents on its website which it believed supported its investigative news stories. The posted documents directly relate to the anguish exhibited today by "clean up Rocketdyne" activists and former Brandeis-Bardin Institute campers from around the state who are dismayed by the California Department of Toxic Substances Control and multiple Federal agencies desires to not order much if any remediation of radioactive and toxic substances on, under and near the Santa Susana Field Lab or Brandeis-Bardin Institute.

Among those documents posted online by NBC LA in 2015 was a letter dated October 23, 1997 from the late Judge Joseph A. Wapner to Brandeis-Bardin Institute's lawyer Barry I. Goldman, enclosing the Settlement and Release Agreement with Boeing North America signed by Judge Wapner in his capacity as President of the Brandeis-Bardin Institute ("BBI"). In the letter Judge Wapner wrote to Mr. Goldman "Enclosed please find the original Settlement and Release Agreement signed by me as President of the Brandeis-Bardin Institute. I certainly hope this matter will be concluded soon. I know that you are doing everything in your power toward that end for which I sincerely thank you."

The copy of that letter obtained by NBC LA showed a "cc" to Dr. Alvin Mars, the then Executive Vice President of Brandeis-Bardin Institute. In the style of secretaries in the 1990's the "cc" to Dr. Alvin Mars had a little check mark next to it on the letter posted online by NBC LA, showing that the particular copy of the letter was the copy physically sent to Dr. Mars by Judge Wapner's secretary.

As a result one can conclude the copy of the letter and its attachment obtained by NBC LA has an appearance of authenticity because it likely came from (1) Dr. Mar's file on the Rocketdyne/Boeing litigation, (2) a file maintained at the offices of Brandeis-Bardin Institute or (3) a file maintained by a person or entity who was authorized to receive a copy under that Settlement and Release Agreement's terms.

To my knowledge, no copy of the "counterpart" of that Settlement and Release Agreement signed by Boeing North America ("BNA") as corporate successor-by-merger to Rocketdyne, Inc. has been published by any media source.

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Commenter No. 621 (cont'd): Michael Collins
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From the text of that Settlement and Release Agreement attached to the letter described above it is fairly clear that neither Brandeis-Bardin Institute nor Boeing North America intended the text of that Settlement and Release Agreement be made public. All that Brandeis-Bardin Institute and Boeing North America intended the public see would be a one page "Dismissal With Prejudice" of the U.S. District Court case captioned The Brandeis-Bardin Institute v. Rocketdyne, Inc, et al, Case No. CV-95-8316 ABC (RMCx) signed by Brandeis-Bardin Institute's lawyer. That practice of filing a one page dismissal of a lawsuit with the U.S. District Court without court-filing of the parties' actual Settlement and Release Agreement is and has been very common for decades.

However, given the veneer of authentication of the version of the 1997 Settlement and Release Agreement signed by Brandeis-Bardin Institute in the late Judge Wagner's letter described above, it is worth looking at the text of that Settlement and Release Agreement to understand the rights (or lack thereof) of Brandeis-Bardin Institute and the American Jewish University subsidiary which owns the Brandeis-Bardin Institute land today.

As a result readers should direct their attention to the that 1997 Settlement and Release Agreement, quoted below, and showing that Brandeis-Bardin Institute gave Boeing North America the customary ironclad release of known and unknown claims arising out of known and unknown facts related to the general subject of the lawsuit. In that Settlement and Release Agreement text "BBI" means Brandeis-Bardin Institute and its subsidiaries, and its successor entities and their subsidiaries and "BNA" means Boeing North America and its predecessor owners of the Santa Susana Field Lab, as well as their subsidiaries and successors in ownership or operation of the Field Lab.

The only comfort the release paragraphs in that Settlement and Release Agreement provide is that Brandeis-Bardin Institute did not purport to release claims held by "other people" who attended events at the property or who camped or ate food grown at the property.

That Settlement and Release Agreement does not describe, in any detail, the hazardous or radioactive substances found or alleged to be found, or not found, on any part of Brandeis-Bardin Institute's property, including the part deeded over to a Boeing North America subsidiary in early 1998 as part of the implementation of the settlement.

Settlement and Release Agreement Section III Paragraph 1 provides: "General Release. BBI hereby releases and forever discharges BNA of and from any and all claims of any kind or nature, under any theory, whether legal, equitable or other, under the law, either common, constitutional, statutory, regulatory or other, of any jurisdiction, foreign or domestic, whether such claims are known or unknown, suspected or unsuspected [sic], including claims that BBI has brought or could have brought, which now exist or in the future may exist, arising out of or in any way related to events or matters referred to or which could have been referred to directly or indirectly in the Action [the Federal court case], including but not limited to, claims relating to hazardous substances at or emanating from the BBI site and the Field Lab."

Settlement and Release Agreement Section III Paragraph 2 provides: "Waiver Under California Civil Code 1542. It is understood that 1542 of the Civil Code of California provides as follows: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR." BBI expressly waives and releases any right or benefit which it has or may have under 1542 of the Civil Code of the State of California, to the extent it may waive all such rights and benefits pertaining to the matters released herein. In connection with such waiver and relinquishment, BBI acknowledges that it is aware that it may hereafter discover claims presently unknown or unsuspected, or facts in addition to or different from those which it now has or believes to be true, with respect to matters released herein. Nevertheless it is the intention of BBI, through this Agreement, and with the advice of counsel, fully, finally and forever to settle and release all such matters, and all claims relevant thereto, which do now exist, may exist or heretofore have existed between BBI and BNA. In furtherance of such intention, the release herein given shall be and remain in effect as a full and

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Brandeis-Bardin's Toxic Denial – EnviroReporter.com

complete release of such matters notwithstanding the discovery or existence of any such additional different claims or facts relative thereto."

The 1997 Release and Settlement Agreement DOE contain "custom drafted promises" between Brandeis-Bardin Institute and Boeing North America concerning remediation and non-remediation of hazardous substances found on the Brandeis-Bardin Institute property after the settlement went into effect. Those custom drafted provisions are found at Article III, Section 7 (page 8) of that Settlement and Release Agreement. Those paragraphs generally leave decision making about remediation to "regulatory agencies", cutting Brandeis-Bardin Institute out of the decision-making process:

Settlement and Release Agreement Section III Paragraph 7a: "Remediation of Hazardous Substances a. BNA shall continue to investigate and remediate under the direction of regulatory agencies the hazardous substances emanating from the Field Lab. BBI shall fully cooperate with BNA, giving BNA access to the BBI Site, in connection with BNA's investigation and remediation under the direction of the regulatory agencies of hazardous substances on the BBI Site emanating from the Field Lab. The scope of BNA's investigation and remediation of hazardous substances shall be determined by the regulatory agencies, and not by BBI. BNA shall be responsible for remediation of the Parcels required by the regulatory agencies..."

To the public that Section III, Paragraph 7a is the most important provision in the Settlement and Release Agreement. In layman's language, Brandeis-Bardin Institute promised not to demand any clean-up of hazardous substances (by definition in the Agreement including radioactive substances) on the Field Lab or on Brandeis-Bardin Institute's remaining property other than clean-up required by "regulatory agencies" which by definition in Article I, Section 3 did NOT include Ventura County or any city.

As a result of that Settlement Agreement's text at Section III Paragraph 7a, if the regulatory agencies do not require remediation to background level, Brandeis-Bardin Institute is stuck with that decision as to its own property and as to the Field Lab property adjoining it. If the regulatory agencies only require 39% of the hazardous or radioactive substances, Brandeis Bardin Institute is stuck with that decision. The only power Brandeis-Bardin Institute still has, under that Settlement Agreement, is to do its own elective remediation of its own property after the regulatory agencies have relieved Boeing North America and its affiliates from any further remediation obligation.

Settlement and Release Agreement Section III Paragraph 7b provides: "b. Before selling, leasing, or otherwise conveying an interest in the BBI Site or any part thereof, BBI (i) shall provide a copy of this Agreement and make full disclosure of BBI's obligation to cooperate fully with BNA, including giving BNA access to the BBI Site, in connection with BNA's investigation and remediation under the direction of the regulatory agencies of hazardous substances on the BBI Site emanating from the Field Lab, (ii) shall obtain the written covenant from all persons acquiring an interest in the BBI Site or any part thereof in the form attached hereto as Exhibit C, and (iii) shall forward such covenant to BNA within five (5) days."

In effect, Exhibit C was to be a binding admission by Brandeis-Bardin Institute as to the implied risks presented by its real estate being located adjacent to the Santa Susana Field Lab.

Unfortunately, the version of the Release and Settlement Agreement which Judge Warner signed as President of Brandeis-Bardin Institute, and which NBC LA posted online, did not have Exhibit "C" attached. That is not unusual. Officers of corporations typically leave it to their company's lawyers to approve the wording of exhibits and attach them to the "official" copies of settlement agreements. No other copies of the final version of Exhibit "C", approved by the lawyers for Brandeis-Bardin Institute and Boeing North America, has surfaced in the press.

If Brandeis-Bardin Institute actually fulfilled its contractual promise to Boeing North America in that Settlement and Release Agreement's Section III, Paragraph 7b quoted above, language mirroring the missing Exhibit "C" should have been signed by the lender under any deeds of trust recorded with

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3-1309

Section 3 – Public Comments and DOE Responses

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the approval of Brandeis-Bardin Institute in connection with its borrowing against the BBI Site prior to or after American Jewish University's acquisition of control of BBI. A document mirroring the text of Exhibit "C" should have been signed by any recipient/grantee of easements over the BBI Site, such as those which the BBI Site property owner granted to neighboring residential real estate developers, utility companies or the City of Simi Valley. The text of Exhibit "C" should have been included in one of the documents under which the BBI Site was deeded to a subsidiary of American Jewish University.

Brandeis-Bardin Institute's "admission" in Exhibit "C", or in documents quoting Exhibit "C" would be of great interest to any individual claiming that they or American Jewish University had a moral, ethical or legal obligation to disclose hazardous substances health risks associated with humans physically being on the BBI Site for any extended period of time. Documents with the Exhibit "C" wording may or may not have been filed with the Ventura County Recorder, because that Settlement and Release Agreement does not require that such a recording be made. As far as I know, no member of the press has publicized Exhibit "C" or a similar document pertaining to the parts of the BBI Site which Brandeis-Bardin Institute, American Jewish University, or their land-owning subsidiary which was recorded in those Ventura County Official Records in 1998 or later.

Other the requirement that Brandeis-Bardin Institute make an Exhibit "C" written disclosure to any legal person obtaining an interest in the BBI Site, the Release and Settlement Agreement between Brandeis-Bardin Institute and Boeing North America contains a broad non-disclosure agreement about that Settlement Agreement binding on Brandeis-Bardin Institute and, through a provision not quoted below, its subsidiaries, affiliates and successors:

Settlement and Release Agreement page 13, Article III, Section 18: "Non-Disclosure. The parties agree not to disclose in any way the terms or conditions of this Agreement to any person other than their counsel, auditors, insurance carriers, lenders, officers and directors, each of whom shall be informed of, and bound by, the confidentiality terms of this Agreement, except in response to a lawful subpoena or other lawful process or as may be required by an independent auditor, or as part of an effort to enforce the terms of this Agreement. In the event that a party believes that disclosure is otherwise required by law or is necessary to enforce this Agreement, it shall give prompt written notice via overnight delivery to the other parties to this Agreement prior to disclosing such information....Said notice shall set forth all of the information which the party to this Agreement proposes to disclose, the statute or other legal authority purportedly requiring disclosure, and the circumstances pursuant to which disclosure is to be made. If the party providing notice to the other party receives no notice within ten (10) days that the other party intends to seek to prevent disclosure, it may produce this Agreement...."

Since the counterpart of that Settlement and Release Agreement signed by Boeing North America has not publicly surfaced, and since the content of Exhibit "C" has not become public, one cannot say with 100% certainty that the Settlement and Release Agreement signed by the late Judge Wapner in October 1997 and posted online by NBC LA is the final version of the document. At the very least litigation and toxics lawyers would say that the document's content looks like one which would have met with the approval of Boeing's lawyers in 1997 as being a "customary" form of settlement agreement relating to hazardous materials contaminated properties in California.

The text of that Settlement and Release Agreement does NOT bluntly require that Brandeis-Bardin Institute (or its successor land owners) not make public comment about hazardous substances or radioactive substances found on, under or near the Brandeis-Bardin Institute at any point in time before or after the settlement. The text of that Settlement and Release Agreement does NOT bluntly forbid Brandeis-Bardin Institute from "warning" people participating in activities on its property, camping or living there, about the past or current status of hazards on the Brandeis-Bardin Institute property (the "BBI Site" referred to in the Settlement Agreement) or the Santa Susana Field Lab/Rocketdyne property.

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However, on a purely investment-minded level there was and still is little benefit to the owners of the Brandeis-Bardin Institute land in Simi Valley to bezzrich the physical condition of their property or property owned by others next door, because Brandeis-Bardin Institute has a history of selling a part of its property for office/warehouse land development and it is conceivable that in the future the American Jewish University could decide to have its subsidiary which owns the Brandeis-Bardin Institute land sell parts of its remaining land for residential development. In that sense, it is in AJU's economic interest that the Federal, California and regional agencies involved in investigating the history of Rockeddyne aka Santa Susana Field lab find that no further clean-up or protective land use regulations are required.

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FEATURE ARTICLE - Brandeis-Bardin's Toxic Denial - Jewish camp below Santa Susana Field Lab, aided by troubled state toxics agency, denies toxics have migrated to its property despite decades of evidence; new Dept. of Energy report proposes not cleaning up most contamination

FIGURES - Includes maps, diagrams and tables. Easy way to see the breadth and scope of the contamination at and around the Santa Susana Field Laboratory.

PHOTOGRAPHS - Historic images, white cattle, Brandeis Bardin wells with toxin detections, public testimony at 2017 DOE DEIS meetings and more.

REPORTS/PRESENTATIONS/ETC - EnviroReporter.com sampling results for Brandeis-Bardin well and government-published reports and public meeting presentations.

VIDEOS - "Sludge from Rocketdyne" from 2014 shows the goo in question. Two videos document the impassioned public testimony at Department of Energy SSFL Draft Environmental Impact Statements meetings in Simi Valley and Van Nuys, California, in February 2017. Camp Alonim snippets show camp musicians cavorting near the white cattle reported on in the exposé. More videos to follow.

2016 DOE-AIJI Summary Brandeis-Bardin Soils - EnviroReporter.com compares DOE soil sampling results in Brandeis-Bardin with EPA-established "Background Threshold Values" (BTVs) in SSFL's Area IV. DOE, and NASA, have agreed to clean chemicals and radionuclides to BTVs.

2015 Boeing Report @Brandeis-Bardin Sees - Analysis of massive Boeing report showing widespread detections of "common laboratory contaminant[s]" in Brandeis-Bardin over many

<http://www.enviroreporter.com/investigations/rocketdyne/brandeis-bardins-toxic-denial-investigation/>

NEW INVESTIGATION



[Brandeis-Bardin's Toxic Denial INVESTIGATION](#)

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- April 9, 2017 Pacific Ocean in Malibu normal background radiation
- April 8, 2017 Los Angeles rain normal background radiation
- April 6, 2017 Brandeis-Bardin's legal challenges in stark detail
- April 1, 2017 115% rad spike in Australia after remnants of ex-Cyclone Debbie
- March 28, 2017 Japan recycling hot Fukushima dirt for parks &

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years of sampling.

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**Brandeis-Bardin's
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[green spaces](#) under a layer of clean earth or concrete

March 23, 2017 '[Criminal madness](#)' to incinerate Fukushima radioactive waste which will disperse it more

March 17, 2017 [Southwest Michigan](#) sleet 37.5% above background radiation

March 17, 2017 [Japan court](#) says government & TEPCO liable for Fukushima in legal first

December 7, 2016 [MORE](#) contamination found in Boeing/SSFL Southern Buffer Zone used to lure hikers and birders to [greenwash SSFL](#)

May 18, 2016 [EnviroReporter.com](#) DECADE 2006-2016

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Figures – Brandeis-Bardin's Toxic Denial

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The following figures are associated with the subjects covered in the EnviroReporter.com expose [Brandeis-Bardin's Toxic Denial](#).



612 score SSFL drainage to Brandeis-Bardin

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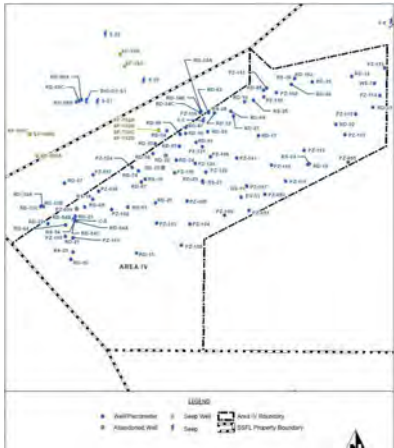
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8-07 SSFL drainages



1-20-16 Brandeis-Bardin monitoring wells

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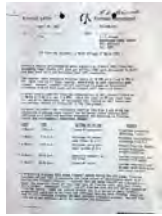
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4-14-83 Rockwell fluoride spraying

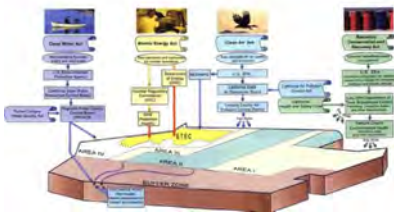
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Overseeing SSFL – Agencies and Laws



Agencies & Laws governing SSFL – Clean Water Act

- Reconnaissance:**
- Field work conducted in May and June 2013
 - Located seeps in newly mapped areas
 - Revisited previously mapped seeps confirming locations and conditions.
 - Portions of Bell Canyon Area remain unmapped and reconnaissance planned for 2014



2013 Boeing Seeps Investigation Misses Ravine Close Up



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Seeps Investigation Progress

Overview of field activities completed in 2013 and planned in 2014

Reinvestigation
 Conducted investigations from 08/01/2013 to 08/01/2013. Results provided to Regional Health Authority. Purpose of this investigation was to re-evaluate the status of the seep.

DP-12
 This well was sampled from 27" to 47" in 2013. The well was found to be dry.

DP-13
 This well was sampled from 27" to 47" in 2013. The well was found to be dry.

DP-14
 This well was sampled from 27" to 47" in 2013. The well was found to be dry.

DP-15
 This well was sampled from 27" to 47" in 2013. The well was found to be dry.

DP-16
 This well was sampled from 27" to 47" in 2013. The well was found to be dry.

2013 Boeing Seeps Investigation Misses Ravine

Chemical Preliminary Remediation Areas in Area IV / NBZ

- Expanded PRAs based on new Phase 3 data
- PRAs extend outside of Area IV if migration of chemicals above LUT values identified
- Sensitive habitat or cultural areas are NOT shown here, although these areas will definitely be evaluated in the RIS

DOE Remediation Area
 NRC Preliminary Remediation Area
 New Lines

Chemical Contamination in Brandeis-Bardin DOE 4-22-14

Even X-Ray Vision Can't Do this

FLIR

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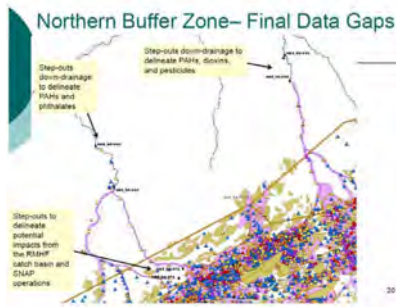
3-1317

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Dioxins PAHs phthalates – Brandeis-Bardin DOE 4-22-14



Chemical Contamination in Brandeis-Bardin DTSC 4-28-15

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June 2015 Northwestern Seeps – Boeing report



Northern Seeps

Table 3-4. Groundwater Monitoring Parameters for Seep Wells Associated with Area IV

Location Name	SR Code Number(s) (Permit #, 2015 SRWCC/LAP#)	Monitoring Schedule	Monitoring Schedule	
Well Cluster	Monitoring Parameters for all Seeps in the Cluster	Normally	Severe Anomaly	
SP 100A SP 100B SP 100C	17	SR05 / SR08 Perchlorate / 124.0	All wells	Sample Well with Highest GW Elevation
SP 13A SP 13B SP 13C	13	SR07 / SR08 Perchlorate / SR09M Perchlorate / SR09 SR06 / SR05 / SR03 SR04 / SR02 / SR01 Perchlorate / 124.0 SR03 / SR02 / SR01 SR05 / SR04 / SR03 SR02 / SR01 SR03 / SR02 / SR01	All wells	Sample Well with Highest GW Elevation
SP 14A SP 14B SP 14C	14, 7	SR05 / SR08 Perchlorate / 124.0 SR06 / SR05 / SR03 SR04 / SR02 / SR01 Perchlorate / 124.0 SR03 / SR02 / SR01	All wells	Sample Well with Highest GW Elevation
SP 15A SP 15B SP 15C SP 15D	Not applicable	SR05 / SR08 Perchlorate / SR03 SR02 / SR01 / SR04 SR03 / SR02 / SR01	All wells	Sample all wells

11-9-15 DOE Brandeis-Bardin seeps associated with Area IV

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The image shows a screenshot of a table from a DOE report. The table has multiple columns with headers that are partially obscured but appear to include 'Location', 'Date', 'Radiation Level', and 'Notes'. The rows contain various data points, some highlighted in yellow and others in green, representing radiation measurements at different sites.

11-9-15 DOE showing Brandeis-Bardin radiation



11-2016 NASA groundwater report



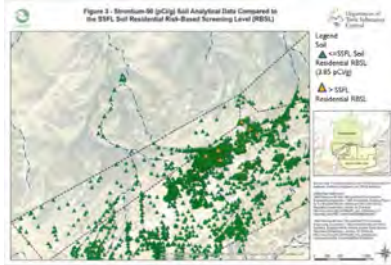
Brandeis-Bardin OS-10 well with high radiation

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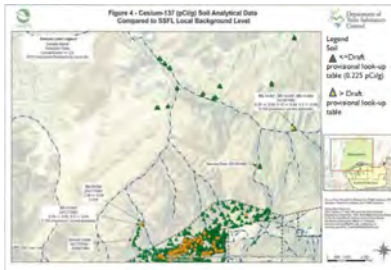
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2016 DTSC Strontium-90 map using wrong levels instead of background



Cesium-137 at 183 x background at SRE site above Brandeis-Bardin



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Reports – Brandeis-Bardin's Toxic Denial

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The following reports, presentations and maps are associated with the subjects covered in the EnviroReporter.com exposé [Brandeis-Bardin's Toxic Denial](#). Their order is generally the same sequence as in the exposé and sometimes labeled as to the information they provide.

- AJU – American Jewish University
- ATSDR – Agency for Toxic Substances and Disease Registry
- DOE – Department of Energy
- DTSC – Department of Toxic Substances Control
- NIOSH – National Institute for Occupational Safety and Health

- [12-30-04 Brandeis-Bardin Soil Tests](#)
- [11-23-05 Brandeis-Bardin Water Tests](#)
- [7-2011 EPA Radiological Background Study Report](#)
- [10-2011 EPA Final Background Study](#)
- [4-22-14 DOE Brandeis-Bardin Chemical Map](#)
- [4-28-15 DTSC Brandeis-Bardin Chemical Map](#)
- [9-2008 Brandeis-Bardin Channel D Chemicals](#)
- [4-12-16 DTSC BR Annual SSFJ Update](#)
- [12-4-10 DTSC DOE SSFJ AOC](#)
- [12-4-10 DTSC NASA SSFJ AOC](#)

NEW INVESTIGATION



[Brandeis-Bardin's Toxic Denial INVESTIGATION](#)

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- April 9, 2017 Pacific Ocean in Malibu normal background radiation
- April 8, 2017 Los Angeles rain normal background radiation
- April 6, 2017 Brandeis-Bardin's legal challenges in stark detail
- April 1, 2017 115% rad spike in Australia after remnants of ex-Cyclone Debbie
- March 28, 2017 Japan recycling hot Fukushima dirt for parks &

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Commenter No. 621 (cont'd): Michael Collins
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4/10/2017 Reports – Brandeis-Bardin's Toxic Denial – EnviroReporter.com

[11-7-15 Brandeis-Bardin Institute Strontium-90 readings analysis](#)

green spaces under a layer of clean earth or concrete

[1-19-95 McLaren/Hart Additional Brandeis-Bardin Institute Soil and Water Sampling](#)

March 23, 2017 'Criminal madness' to incinerate Fukushima radioactive waste which will disperse it more

[5-21-14 DTSC-IARWOCB SSFL Ground & Surface Water](#)

March 17, 2017 Southwest Michigan steel 37.5% above background radiation

[7-29-08 Boeing Plutonium-238 at Brandeis-Bardin](#)

March 17, 2017 Japan court says government & TEPCO liable for Fukushima in legal first

[1-2013 NASA Cesium-137 Brandeis-Bardin](#)

[6-25-91 Rocketdyne Radioactive Cow Meadow Muffins](#)

[2-2006 UCLA Potential for Offsite Exposures Associated with Santa Susana Field Laboratory](#)

December 7, 2016 MORE contamination found in Boeing/SSFL Southern Buffer Zone used to lure hikers and birders to greenwash SSFL

[2-2007 University of Michigan SSFL Rocketdyne Epidemiologic Study](#)

May 18, 2016 EnviroReporter.com DECADE 2006-2016

[11-9-15 DOE Final Groundwater Work Plan](#)

[11-2016 NASA LOX Groundwater](#)

KB Home's Runkle Canyon development called Arroyo Vista at the Woodlands

[4-14-83 Rockwell Fluoride Spraying](#)

8,383 EnviroReporter.com rad reports March 11, 2011 to March 11, 2016 and counting

[2015 Boeing Report Brandeis-Bardin Seeps](#) – EnviroReporter.com analysis

[2016 DOE-AJU Summary Brandeis-Bardin Soils](#) – EnviroReporter.com analysis

[9-1995 ATSDR Toxic Substances Portal – Antimony](#)

[12-23-16 ATSDR Biomonitoring Summary – Molybdenum](#)

[9-2003 ATSDR Toxicological Profile for Selenium](#)

[1-21-15 ATSDR Toxic Substances Portal – Polycyclic Aromatic Hydrocarbons \(PAHs\)](#)

[3-25-2014 ATSDR Toxic Substances Portal – Naphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene](#)

[3-3-11 ATSDR Toxic Substances Portal Di\(2-ethylhexyl\)phthalate \(DEHP\)](#)

[12-4-14 NIOSH Fluorine](#)

[10-8-15 ATSDR Toxic Substances Portal – Endosulfan](#)

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[1-6-17 DOE Draft Environmental Impact Statement \(DEIS\)](#)

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Commenter No. 622: Anonymous

I implore the U.S. Department of Energy "DOE" to fully cleanup the SSFL site contamination as the DOE agreed to, and signed, in the 2010 Administrative Order on Consent "AOC". It is not all right for the DOE to renege on the AOC agreement by changing the terms and compromising the health and well-being of residents, and may I say many future generations, in all nearby communities. The site must be cleaned up fully and completely to remove all detectable contamination!

The 4 EIS proposals presented by the DOE are NOT in compliance with the 2010 signed AOC. To leave ANY of the detectable contamination in place allows for the contamination to adversely affect and impact communities that are nearby.

In 1994 when my husband and I married, we moved into our home on Appleton Road in Simi Valley. We are in close proximity to the SSFL when the wind radius is taken into account, and we live just down the street from Runkle Canyon. We have 2 sons. Three years ago one son was diagnosed with a chronic thyroid condition at the age of 15. I am extremely worried about him. There are contaminants at the site that are known to cause thyroid health issues. When the rocket engines were being tested, we would hear the extremely loud rumble of the rocket engines, and at those times, our windows would rattle and shake.

The name "Simi" means windy, and Simi Valley is a windy city. Hazardous contaminants at the SSFL can easily blow in the wind in any direction. Hazardous contaminants can easily run downhill from the SSFL when it rains. To leave any detectable contaminants at the SSFL would absolutely be the wrong action to take.

There are some who want to preserve, in place, the rocket engine test stands and the Chumash Indian paintings that are on the grounds of the SSFL. I am not one of them. If that is done, the DOE would not be removing the detectable contaminants under and around those test stands and the Indian paintings. That is not acceptable! People presently living, and future generations to come, are immeasurably more valuable than the rocket engine test stands and the Chumash paintings. Make replica stands and put those replicas somewhere else to be viewed. Have a government photographer photograph the Chumash paintings to preserve what those paintings look like before they are removed from the site. I recognize that the rocket engine test stands and the Chumash paintings are a part of history. I surely hope though that the DOE does not take the position that the rocket engine test stands and Chumash paintings are more important and valuable than human lives!!

The DOE needs to concentrate on how it is going to completely cleanup the detectable contaminants at the SSFL rather than on how much of the site's contaminants it is going to cleanup or whether it will do any cleanup!

The DOE must abide by the AOC to cleanup ALL detectable contamination. It is the U.S. Federal government's duty to protect its citizens. It is the U.S. federal government that was involved with the SSFL nuclear site as well as the testing of the rocket engines. With the nuclear meltdown of many years ago, it is the U.S. federal government DOE that has the responsibility to clean it up. It has been way too many years already that residents in the surrounding communities have been exposed to the hazardous contaminants. Cleanup should have been done long ago. It still needs to be done!

To those in the DOE who have decision power regarding the cleanup of the SSFL site, I ask "If you lived close by the SSFL site, would you want yourself and your family and generations that follow to be continually exposed to hazardous contaminants that can cause horrific health conditions?"

622-1

622-2

622-3

622-4

622-1
cont'd

622-2
cont'd

622-1 DOE acknowledges your concern about full cleanup of the contamination at SSFL in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. In addition to a No Action Alternative in accordance with the requirements of NEPA, this EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (see Section 2.2), as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

With respect to your concern about residents in the surrounding communities being exposed for years to hazardous contaminants, please refer to Section 2.7, "Offsite Impacts," and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for additional information. As discussed in these sections, Area IV is not currently spreading contamination to offsite areas, including offsite groundwater, and each of the alternatives evaluated in this EIS is protective of public health and safety and the environment, both on and off the SSFL site.

Commenter No. 622 (cont'd): Anonymous

To do nothing in the way of cleanup or only partially cleanup the SSFL site is absolutely NOT acceptable. All detectable contamination must be removed as per the 2010 AOC which was agreed to and signed by the U.S. Department of Energy!!

|| 622-1
cont'd

- 622-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD for accurate information about contamination in the area around SSFL, including soil testing that has been done and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 622-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.
- 622-4 Please note that DOE has no jurisdiction regarding protection of the rocket engine test stands, or the Burro Flats Painted Cave because these resources are not located in DOE administered portions of Area IV or the NBZ. DOE proposes to protect human health without unduly damaging the environment, as reflected in the range of alternatives DOE developed and analyzed, allowing a comparison of impacts among the various resource areas, including cultural resources. Also, please see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process that will be used to determine exemptions.

Commenter No. 623: Southern California
Federation of Scientists

Dear Ms. Jennings

The Southern California Federation of Scientists attempted to transmit via the DOE SSFL EIS website our comments and exhibits, but there were numerous problems with your website. We kept getting an error message, saying "We're sorry but we have encountered an error processing your request. If the error persists, please contact Site Support." See the screen shot attached of one of the error messages.

We are therefore sending to you the comments and exhibits in the enclosed CD.

623-1


623-1

DOE apologizes for any difficulties you may have had submitting comments through the website. Site support was available to assist with any difficulties as you indicated in your comment. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. In addition, multiple means were provided for public comment. Members of the public were invited to attend the public hearings in Simi Valley on February 18, 2017 and Van Nuys on February 21, 2017 to make comments orally or submit paper copies. DOE also accepted comments by U.S. mail.

Commenter No. 623 (cont'd): Southern California
Federation of Scientists

Santa Susana Field Laboratory Area IV Environmental Impact Statement 4/13/17, 11:44 PM

Santa Susana Field Laboratory Area IV EIS - Error

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<http://www.ssfareiveis.com/comment.aspx> Page 1 of 1

623-1
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**Commenter No. 623 (cont'd): Southern California
Federation of Scientists**

Comments of
The Southern California Federation of Scientists
on the
Draft Environmental Impact Statement
for Remediation of Area IV and the Northern Buffer Zone
of the Santa Susana Field Laboratory
April 13, 2017

Introduction

The Southern California Federation of Scientists (SCFS) was founded after the Second World War by former Manhattan Project scientists. It is dedicated to providing scientific assistance on important public problems. In that vein, SCFS has been involved for nearly forty years in efforts to get the contaminated Santa Susana Field Laboratory cleaned up.

SCFS has carefully reviewed the draft Environmental Impact Statement (EIS) issued by the Department of Energy (DOE) for cleanup of the contamination of its parts of SSFL. We reluctantly conclude that it is not a scientifically defensible document. It appears to be more a polemical effort to justify breaking cleanup commitments DOE made. This is part of a long pattern by DOE of contaminating its sites nationwide through poor environmental practices, then resisting cleanup obligations, eventually being forced to enter into legally binding cleanup agreements with states, and then breaking them. We find this very disturbing from a public health and environmental protection standpoint.

An EIS is supposed to be a neutral, fact-driven effort to scientifically assess impacts and ways to mitigate impacts to inform decision-makers as they make decisions within their discretion. This EIS does not meet those requirements. Rather, it appears filled with erroneous and misleading assertions that do not bear scrutiny.

In 2010 DOE proposed and then signed a legally binding agreement (an Agreement on Consent, or AOC) with California to clean up all the contamination at SSFL to background. In 2012 DOE committed that any EIS it might produce would be AOC-compliant, with all alternatives addressing how to achieve the required cleanup, not whether to do so (with the exception of the standard "No Action" alternative). With this EIS, DOE has broken both the 2010 and 2012 commitments.

All alternatives in the EIS violate the AOC ban on consideration of "leave in place alternatives." One would leave in place about half a million cubic yards of contaminated soil; alternatives two and three would leave 90% or more.

The City of Los Angeles, the Natural Resources Defense Council, and the Committee to Bridge the Gap have submitted detailed comments. We share their concerns and join the comments they have made. While some duplication is inevitable, we will here expand on

623-2

623-3

623-2 Please see Chapter 2, Section 2.3.3 of this Final EIS for a detailed discussion of the regulatory and science-based reasoning for looking at alternatives other than compliance with the 2010 AOC, as required by NEPA. Contrary to the commenter's assertion that DOE knew of all the issues when it signed the 2010 AOC, in actuality most of the information on the conditions at the site were not known in detail and the technical issues of implementing the AOC had not been identified. And the statement that "Nothing has occurred since the AOC that provides justification" for DOE's assessment of the implementability of the AOC is not correct. Since the signing of the AOC a lot more information is now available that was not available at that time. Since the 2010 AOC was signed. For Example, EPA completed the radiological characterization of Area IV and the NBZ; DOE completed the chemical characterization of Area IV and the NBZ; radiological and chemical background study reports were completed; and DTSC issued LUT values for chemicals and radionuclides. This wealth of later-acquired information has informed DOE's decision-making during the NEPA process. Chapter 2, Section 2.3, of this EIS outlines several issues associated with the implementability of the 2010 AOC.

623-3 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent" of this CRD for a discussion of this topic. Subsequent to 2012, as new data became available, DOE considered those data and adjusted its thinking and evaluations accordingly. For example, DOE's knowledge regarding the nature and extent of soil contaminants, and the impact that the cleanup in accordance with the 2010 AOC LUT values would have without environmental benefit, has evolved since the agreement was signed. As contemplated by the AOC, DOE was required to undertake an environmental review, which is this NEPA process. As required by NEPA, DOE has objectively evaluated reasonable alternatives to achieve the goal of site remediation. One of the alternatives evaluated addressed the technical elements of the 2010 AOC (Cleanup to AOC LUT Values). In keeping with its responsibilities under NEPA, DOE also developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the health and safety of the public and the environment.

Regarding the statement that the AOC has a ban on consideration of "leave in place alternatives", Section 2.6 of the AOC recognizes the potential for on-site and in situ treatment of soils. Monitored natural attenuation (MNA) is an in situ treatment option. MNA does not "leave in place" contamination but rather recognizes the destruction of contamination via natural processes and is well-accepted in the environmental field.

Commenter No. 623 (cont'd): Southern California
Federation of Scientists

some of those issues and focus on additional matters. We do need to reinforce some key points as well.

The EIS's History of the Site Understates the Extensive Environmental Problems

A good measure of whether DOE has understood that it must start conducting itself in a neutral scientific manner is whether it can candidly admit its failures in terms of poor environmental and safety practices and potential impacts on its workers and the neighboring public. Unfortunately, the EIS sections dealing with these matters are more spin than accurate description of these failings. The accident descriptions improperly minimize their seriousness. The discussion of the credible years-long studies (government funded, yet performed at arms-length) of increased cancers among the exposed workers and the people living nearby is cavalier. Furthermore, the various state- and federally-funded studies by the SSFL Oversight Panel are nowhere mentioned. We attach several of the key ones.

For the EIS to be credible, DOE needs to admit its failings. The EIS fails to do this.

Purpose and Need Statements are Wrong

The 2012 DOE promise was that the EIS purpose and need were to carry out the 2007 Consent Order for cleanup of groundwater and the 2010 AOC for cleanup of soil to background. DOE has now violated that commitment and its purpose and need no longer say so. Instead, the EIS proposes alternatives all of which violate the AOC. This must be remedied.

The EIS Deals With Matters Far Outside DOE's Discretion

Under NEPA, an EIS is conducted for *discretionary* federal agency actions. The original purpose and need commitments for the EIS were within DOE's discretion – examining alternative ways of achieving the cleanup to background required by the AOC (e.g., active in situ treatment, different transport options). However, the EIS as issued is now almost entirely about matters that are outside DOE's discretion. DOE is legally bound by the AOC. The AOC specifies that DTSC has the regulatory authority over the chemical and radioactive cleanup. And even were there no AOC, the cleanup of the chemicals, which DOE says represents the great majority of the contamination, is solely in DTSC's authority under the Resource Conservation and Recovery Act (RCRA). DOE has no power to choose how much contamination it will clean up. It cannot in fact perform an EIS and issue a Record of Decision based thereon about how much cleanup it will do. It is the polluter and the polluter does not get to choose how much of its pollution it cleans up. The EIS is thus an affront to the authority of the regulator and is about matters DOE does not have authority over.

623-4

623-5

623-6

623-4 DOE's current focus is to complete the cleanup of the remaining contamination in those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. To that end, the current condition of Area IV and NBZ, not the past incidences within Area IV, is relevant. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Also see Section 2.8, "Cancers and Other Illnesses Near SSFL," of this CRD for additional discussion of cancer within the population near SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

623-5 DOE notes that it does include reference to a SSFL Advisory (Oversight) Panel report (Report of the SSFL Advisory Panel) in Chapter 3, Section 3.9.5 of this EIS. Other topical reports (like those provided by the commenter relating to groundwater) were reviewed in preparing this Final EIS and incorporated as appropriate.

623-6 The specific wording of DOE's purpose and need has been refined since it was first stated in the 2007 Advance Notice of Intent, but the overall message expressed by the statement has remained consistent – DOE needs to remediate those portions of SSFL for which it is responsible in a manner that is protective of the environment and the health and safety of the public and workers. The change noted by the commenter in the statement does not change DOE's responsibility for complying with agreements, as well as with other requirements such as regulations and orders. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of how DOE's alternatives relate to the 2010 AOC. DOE's knowledge regarding the nature and extent of soil contaminants, and the impact that the cleanup in accordance with the 2010 AOC LUT values would have without environmental benefit, has evolved since 2012. As discussed in Chapter 2, Section 2.3.3.1 of this Final EIS, DOE determined that there were technical issues with implementing a cleanup

Commenter No. 623 (cont'd): Southern California Federation of Scientists

The Alternatives All Violate the AOC, as Well as the 1995 EPA-DOE Joint Policy and DTSC Standard Cleanup Requirements

The AOC requires cleanup to background. Alternative 1 estimates more than 1.4 million cubic yards of soil have been contaminated above the levels promised in the AOC to be cleaned up. Yet DOE proposes to not clean up about half a million cubic yards, 34-39% of the total, just leaving it in place despite the prohibition on doing so in the AOC. None of the reasons given by DOE meet the strict, narrow requirements for exceptions in the AOC. They would leave large amounts of contaminated soil not cleaned up, often in areas of the greatest pollution impacts. This is untenable.

Alternative 2 would replace the AOC's Look-Up Table (LUT) cleanup values with new values created by DOE. These are often hundreds or thousands of times higher than the promised cleanup levels, and would leave vast amounts of contamination not cleaned up. DOE disingenuously asserts these LUT values are based on risk based screening levels (RBSLs) for suburban residential exposures from the DTSC-approved Standardized Risk Assessment Methodology (SRAM). Perhaps DOE presumed no one would check to see if that were true. The SRAM is, after all, a very long document, more than a thousand pages. But on page 1071 and following in the pdf, the RBSLs are given. And the SRAM-based suburban residential RBSLs, with the required garden component, are orders of magnitude lower (more protective) than the ones put forward by DOE in the EIS. The risks of leaving that much contamination in place are thus hundreds and thousands of times higher than DOE claims in the EIS.

Almost the entire premise of the EIS is that there is no risk to not cleaning up SSFL, and so the only impacts to consider are the impacts from cleaning up (e.g., truck traffic). But that is completely incorrect. By using the wrong risk based screening levels, the entire claim of limited risk in the EIS is consequently wrong as well. The cost-benefit analysis, which is similarly based on erroneous risk figures, becomes useless in addition.

Alternative 3 would not only use cleanup standards for chemicals that are orders of magnitude weaker than the required AOC LUT values and the true residential RBSLs, but weaken things even further by using astronomically high cleanup levels for radionuclides, and on top of that, averaging contamination across wide areas. High contamination levels would not get cleaned up, based on the claim that contamination levels acres away are lower. This violates basic scientific and public health principles, EPA guidance, and the AOC.

The proposed radionuclide cleanup levels for radionuclides are extremely high, and grossly non-protective. We attach here tables comparing DOE's Alternative 3 radionuclide cleanup levels with the promised levels, and with EPA's Preliminary Remediation Goals (PRGs) for the scenario DOE claims to be using, suburban residential exposures. We also include tables showing the actual radiation dose estimates for those concentrations DOE proposes, and the cancer risk estimates, from EPA's Dose Compliance Calculator and the PRG calculator.

623-7

623-6

according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under NEPA, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the environment and the health and safety of the public and workers. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this EIS. As noted in Chapter 2, Section 2.2.1 of this EIS, DOE has indicated that changes to the AOC may be required. Sections 6.0 and 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE would engage DTSC in discussions about such changes in order to implement any soil remediation alternative.

623-8

Section 6.1 of the AOC recognizes the legal requirement of DOE to prepare the EIS. DOE must meet the requirements of NEPA, compliance is not discretionary. Also, Section 6.2 of the AOC recognizes that DOE is to perform an environmental review that could lead to a change to the AOC. NEPA is the correct legal process to perform that review. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs that analyze the potential environmental impacts of the Proposed Action and reasonable alternatives that meet the agency's purpose and need. DOE has a legal obligation in this EIS to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision(s) (ROD[s]) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ. In accordance with the 2010 AOC, Section 7.11, "Compliance with Applicable Laws and Regulations," all actions taken by DOE pursuant to the order will be undertaken in accordance with applicable local, State, and Federal laws and regulations. This clause recognizes that DOE must comply with NEPA as do Sections 6.1 and 6.2 of the AOC. Section 6.1 acknowledges DOE's obligation to prepare an EIS and ROD pursuant to a court order. Section 6.2 recognizes the need to complete an environmental review that meets the requirements of the court order.

623-9

The EIS itself is not a decision document, it only analyzes potential impacts of the proposed action and alternatives that meet the agency's purpose and need. This EIS

Commenter No. 623 (cont'd): Southern California
Federation of Scientists

The numbers are disturbing. DOE's proposed cleanup standards for some key radionuclides are hundreds of thousands of times higher than the EPA PRGs for suburban residential exposures. They produce risks hundreds of thousands of times higher than the one in a million (10^{-6}) excess cancer risk DOE claims its alternative proposals would meet. Some of those risks are as high as every third person getting a cancer they would not otherwise have gotten had they not been exposed. The radiation doses estimated by the EPA dose calculator for those concentrations are the equivalent of thousands of chest X-rays a year, year after, from conception until death. (As shown in material attached, a chest X-ray is about 2 millirem, or 0.02 mSv. The dose from the proposed cleanup levels for a true suburban residential exposure according to EPA's dose calculator would be thousands of millirem per year for a number of the radionuclides.)

The entire basis of DOE's claim that it can walk away from cleaning up the contamination is predicated on cleanup standards so high, so non-protective, that they would be automatically dismissed if they were candidly disclosed in the EIS. But of course they are not. Only people deeply versed in the field would understand that a proposed cleanup standard of 1200 picocuries of strontium-90 per gram of soil, as put forward by DOE, is immense, and that the EPA PRG by contrast is 0.00361 pCi/g—more than 300,000 times more protective than DOE's proposed standard.

At the core of DOE's sleight of hand is its claim that it would clean up to suburban residential standards based on the SRAM and EPA's PRGs, when in fact it has left out the key component required by both: the backyard garden. By leaving it out, they propose cleanup standards orders of magnitude weaker than normally required. There is no logical basis for this action, and DOE buries the omission in a couple of footnotes and then repeatedly in the EIS claims it is proposing cleanup to suburban residential standards, without disclosing that it is not really doing so.

One can understand that if a Responsible Party hopes to get out of obligations that it might try such tactics, but they are distressing from a governmental agency, particularly when people's lives are at stake. Whatever the end uses of SSFL—and that use remains uncertain and EPA and DTSC procedures require cleanup to the uses allowed by local zoning and General Plan designations, which here allow residences with gardens as well as allow agriculture—people live near SSFL, and they have backyard gardens, and there is also agriculture. They must be protected.

One of the main deficiencies in the EIS is that there is no analysis of offsite impacts to the public from not cleaning up the contamination. The only impacts analyzed are of impacts from cleaning up (e.g., trucks).

Alternative 3 is called "Conservation of Natural Resources." This is remarkable, in that conserving the natural resources is the opposite of what this alternative would accomplish. After polluting those natural resources for decades, DOE now tries to use them as an excuse to not remediate the pollution of those very ecological features. The DTSC-approved SRAM established ecological risk based screening levels (Eco RBSLs), to protect ecological receptors. The EIS fails to disclose those Eco RBSLs, or to compare the cleanup levels it

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analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the Federal Register. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by DOE decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL; the Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC is expected to issue a Notice of Determination for the Program EIR identifying their selected remedial actions. Once this is done DOE and DTSC would conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination. This process does not result in DOE getting to "choose how much of its pollution it cleans up," but rather results in DTSC and DOE making informed decisions.

623-7 The AOC allows for in situ treatment, and this treatment option is only addressed for soil containing low concentrations of TPH and that contain no other contaminants. The exemption (exception) process presented in the Draft EIS was developed during a series of meetings attended by US Fish and Wildlife Service, California Department of Fish and Wildlife, and California DTSC personnel. Both USFWS and CDFW issued letters concurring with the process. The Draft EIS presented the outcome of those meetings. The comment is in error with the statement that the AOC has "strict and narrow requirements for exceptions". The AOC has no stated "strict and narrow requirements" for biological and cultural exceptions, except the overall requirement that DOE and DTSC comply with all Federal, State, and local laws and regulations in conducting cleanup. (One category of exceptions, unforeseen circumstances, does have

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proposes to those values. If it did so, it would have to disclose that the contamination levels it proposes to leave in place, in violation of the AOC, are orders of magnitude higher than the EcoRBSLs. In other words, the alternative that DOE, in an Orwellian fashion, claims is to protect natural resources would in fact continue to expose ecological receptors to toxic materials hundreds of times higher than the levels determined to put them at risk.

The EIS is Largely a Polemic Attacking the Agreement DOE Proposed and Signed

An additional indication of DOE's efforts to use the EIS as a polemic to support breaking its legally binding commitments rather than a scientific document to inform decision-makers how to protect the environment and public is that the arguments given as to why the AOC should be broken are trivial, erroneous, and/or misleading. We discuss these in significant detail in the attachment. Suffice it to say that none of the claims is meritorious. Nothing new has occurred since the AOC that provides the justification. The assertions do not bear scrutiny.

Inflation of Soil Volume Estimates, Truck Impacts

As part of the polemical attack on the AOC it signed, DOE has markedly inflated its estimates of soil volumes that would need to be transported. SCFS has criticized these unscientific assumptions in our scoping comments, attached hereto. Virtually all of the problems we identified remain (with the possible exception of the fluffing issue). For example, if a soil sample near the surface was found to be contaminated, DOE often assumed all soil down to bedrock would have to be removed, even if there was no evidence of the entire soil column being contaminated. Similarly, if a soil sample at one location showed contamination, DOE would often assume all soil laterally from that location would have to be removed, all the way to where the soil ended at a bedrock outcropping. Through such clearly unsupported assumptions, almost all designed to greatly increase the soil estimates, DOE essentially colored in all of Area IV as needing cleanup.

If indeed DOE contaminated all of Area IV, then its environmental mismanagement was even greater than previously realized and the need for the promised full cleanup is even greater than before. DOE can't have it both ways - claiming far more contamination than previously disclosed while arguing for far less cleanup than it promised.

Failure to Examine Reasonable Transport Alternatives

DOE refuses to consider any options to minimize impacts of transport. There are roads leaving from Area IV going north that could readily be upgraded and allow trucks to travel passing far fewer homes, if any, compared to the routes DOE puts forward. And the option of using a covered conveyor system of the sort frequently used in mining and similar operations is not examined at all. It could cut the cleanup time down to a year or so. Similarly, DOE considers only trucking the waste 60 miles to a yet-to-be-opened train location 60 miles away, while refusing to consider using the rail line that is a mile or so from SSFL. Rail could greatly reduce a whole range of impacts, including greenhouse gas emissions and trucks through neighborhoods, while also saving a good deal of money. It

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a limit of 5% of the total soil cleanup volume. In this EIS, DOE has not used this category to identify areas in which the exemption process would be applied.) Please refer to Sections 2.2, "Compliance with the 2010 Administrative Order on Consent," and 2.4, "Applications of Exemptions Under the 2010 Administrative Order on Consent," of this CRD for additional information.

The 2010 AOC identifies three of exceptions. The first two (ones that DOE has applied in the identification of areas in which the exception process would be applied) are the exemptions for protection of biological and cultural resources. This exemption is based on the Biological Opinion provided by USFWS (see Appendix J), consultation with CDFW, and an agreement with the State Historic Preservation Officer. The 2010 AOC has no limitations on what these three entities determine should be protected. The volumes in this EIS are based on consultation with the three entities. The third exemption is for "unforeseen circumstances." DOE has not identified any locations meeting the "unforeseen" definition and did not use this exemption in the EIS. As discussed in Chapter 2, Section 2.3.2, of this Final EIS, soils within the boundary of an exemption area that have higher concentrations of chemicals or radionuclides (above human health or environmental Risk Based Safety Levels [RBSLs]); that is, those that pose a risk to human health or to plants and animals, would be subject to focused removal actions.

623-8 The statement that the Revised AOC LUT alternative includes "values created by DOE" is not correct. In the Draft EIS, DOE incorporated RBSLs values from the SRAM for the suburban resident (without garden) exposure scenario. The RBSLs were developed under DTSC oversight and approved by DTSC for use at SSFL. The assertion that the SRAM requires a "garden component" is incorrect. The SRAM includes RBSLs for multiple scenarios including the suburban resident, with and without the garden pathway. A garden pathway was not used in the RBSLs for the EIS, as residential development with garden was not a future land use for the SSFL property when the Draft EIS was developed, and it is now prohibited. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. Therefore, the use of the selected RBSLs in this EIS is consistent with the future land use as open space.

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appears DOE is doing everything it can to argue why it shouldn't meet the obligations it made in the AOC for a full cleanup, instead of doing a scientific EIS that tries to identify ways to mitigate impacts to the extent possible.

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Offsite Contamination

Last year, DOE informed DTSC that it had found contamination that had migrated off SSFL and onto the neighboring Brandeis Bardin Institute, a children's camp abutting SSFL, at levels exceeding the AOC LUT values. It estimated under the AOC, DOE would have to clean up as much as 1 acre because of the contamination. A copy of the DTSC administrative draft EIR chapter with this revelation is attached. However, there is no mention of this in the DOE EIS. The AOC requires following plumes offsite if they exist and remediating them. This should be explicated in the EIS.

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Groundwater Contamination

The 2010 AOC and the 2007 Consent Order require cleanup of groundwater. Instead, the EIS contemplates not cleaning it up, just leaving it in its contaminated state and hoping some of the contaminants eventually attenuate. This violates the Orders and protection of public health and the environment.

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The EIS didn't include groundwater as part of the risk assessment, asserting that wells produce only 0.5 to 1 gallon per hour, too little for domestic consumption. Yet the report they cite doesn't support that claim, instead giving well production rates as high as 4.35 million gallons per year, clearly enough for domestic use. Indeed, supply wells at the site produced water for extensive site use, including drinking water, until contamination in the wells was finally recognized and their onsite use discontinued.

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There is no risk assessment for the water, whether drunk, used for agriculture, backyard garden, or other uses, and no assessment if the plume migrates further offsite. The groundwater clearly can be used, and in fact is a beneficial water source, and refusal to clean it up would violate the Orders and the requirement to protect such sources.

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It is not clear tritium levels are indeed diminishing, rather than sources with higher concentrations leaching more tritium in. Well RD 90, for example, is essentially unchanged from 2010-2014, at 2 x MCL; CDM Smith 2015 PDF p. 59. The California Department of Health Services did a study some years ago noting that tritium levels were not degrading and in some cases going up. There is no basis for asserting that in 12 years it will be at the MCL.

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And other contaminants clearly can continue to migrate and contaminate groundwater and surface water. Surface water discharges continue to violate the site's NPDES discharge permit. And as Dr. Tabidian's study demonstrates, other contaminants like perchlorate appear to have migrated from SSFL into Simi Valley, contaminating groundwater and a significant fraction of wells there.

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In the Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

The EIS does not state "that there is no risk to not cleaning up SSFL". The existing risk posed by soil in Area IV is presented in Chapter 4, Section 4.9.2.1, of the Final EIS and the manner in which that risk is reduced is presented in Appendices G and K. As stated above, the correct RBSLs were used to assess the risk and the Cost Benefit Analysis provides a depiction of the risk reduction by alternative.

The commenter is also wrong in the assessment of Alternative 3 "violates basic scientific and public health principles" and "EPA guidance". Alternative 3 is based on EPA guidance and follows the processes EPA uses nationwide and DTSC for sites throughout California. The Conservation of Natural Resources (the commenters Alternative 3) would first remove soil with elevated concentrations of radionuclides and chemicals and then assess remaining risk to verify a cleanup to risk-based standards. In no instance would "high contamination levels" not be cleaned up. Averaging of data is not performed "across wide areas" (DOE used 2.5 acre lots for the analysis) and high concentrations at one location are not averaged with data "acres away".

The radionuclide cleanup levels are consistent with the future land use. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in dose estimates that are in a range that is consistent with the CERCLA target risk range. Please see the response to comments 623-99 relative to applicable pathways, 623-110 relative to EPA CERCLA requirements, and 623-55 relative to risk limits. The exposure pathways assumed to be applicable in the draft were clearly delineated in both the text discussion and footnotes of tables in Chapter 4, Section 4.9 of the draft EIS and in the text discussion and footnotes of Appendix G along with the rationale for selection. The use of the term Suburban Residential was used to be consistent with the SRAM which separately used the term and provided separate RBSLs for both the direct pathways and the garden pathway.

The basis for cleanup of a contaminated site is not always based on "local zoning and General Plan designations", as both are subject to change. EPA guidance for conducting a risk assessment and soil cleanup does not state that risk should be based solely on zoning rules. EPA's Risk Assessment Guidance for Superfund, Part A (EPA 1989) states that in identifying future land use one should "determine possible alternate

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No Analysis of Remedy for the Sodium Burnpit and the Landfill

For decades, DOE illegally burned radioactively and chemically contaminated waste in the sodium burnpit. This caused extensive contamination of soil, bedrock, surface water and groundwater.

Twenty years ago, an "interim measure" was conducted to remove some of the contaminated soil. Other soil was placed on top of it thereafter as a "temporary cap" until a permanent remedy was carried out. A study by Dr. William Bianchi (attached) demonstrated that moisture readily could penetrate that temporary soil layer.

Nowhere in the EIS is there an analysis of a final remedy for the remaining contamination in the sodium burnpit.

Similarly, the Area IV landfill contains contaminants buried therein. It was long promised that the landfill would exhumed and the contaminants removed. Again, there is no analysis in the EIS of the landfill and its remediation.

Improper Comparison to Other Sites

In support of its effort to break its SSFL cleanup commitments, DOE points to two other sites, that it claims have less protective cleanup standards. This, of course, is not much of an argument; another site doing a poor job of cleanup does not justify DOE doing the same or breaking the AOC it signed. But it cherry-picked those two sites, leaving out others that are being cleaned up to background or to true unrestricted residential standards. And even with those two, it misrepresents the situation. Hunters Point is a very controversial site, with substantial concern because it failed to follow EPA guidance in setting cleanup standards and then employed Tetra Tech which was found to have fabricated soil measurements. But Hunters Point doesn't really support DOE's argument; radioactivity there, for example, is being cleaned up to EPA PRGs for suburban residential use with a garden (albeit outdated PRGs), levels far, far lower than the radioactivity cleanup levels DOE is proposing for SSFL in its Alternative 3. Furthermore, the other site to which DOE points, McClellan Air Force Base is being restricted to industrial uses and the cleanup standards set accordingly. So comparing DOE's proposed supposed residential standards at SSFL to restricted industrial standards at McClellan is an apples and oranges problem. Even so, many of the cleanup standards at McClellan, including those DOE chose not to disclose, are comparable to the LUT values and more protective than what DOE proposes for SSFL.

Conclusion

Dr. Steven Chu, the Nobel Prize winning physicist then serving as Secretary of Energy, and Dr. Inez Triay, then the Assistant Secretary for Environmental Management, proposed to the State of California that DOE commit to cleaning SSFL to background. DOE then signed a legally binding agreement with California to do precisely that.

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future land uses based on available information and professional judgment." In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. Consequently, residences with gardens or agriculture are not reasonable future land uses and open space (i.e., consideration of a recreational user) is the appropriate future scenario for performing a risk assessment.

In the Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that offsite local residents may get some portion of their food from a home garden.

623-11 In the Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that offsite local residents may get some portion of their food from a home garden. DOE had made DTSC aware of sample results much earlier than last year. AOC LUT values are not risk based, exceeding a LUT value does not pose a risk for most chemicals. DTSC concluded in its review of the data that "While the sediment sample results are above LUT values, they do not pose a threat to human health or the environment." The low concentrations of contaminants in this sediment do not pose a risk to users of the Brandeis property.

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

623-12 The "Conservation of Natural Resources" alternative conserves the natural resources by removing soil contamination that would exceed human health and ecological standards, thereby protecting resources from contamination. It conserves the resources by not impacting land that exhibits low concentrations of contaminants that do not pose a risk. This Final EIS (Section 4.5.1.4) was revised to incorporate soil cleanup based on ecological risk considerations into the Conservation of Natural Resources Alternative. DOE used a risk-based approach in which soil is removed where it represents a risk to human health or ecological resources as determined by the application of risk assessments utilizing both human health RBSLs and ecological risk-based levels (as defined in the SRAM [MWH 2014]). In some locations within Area IV, the results of the human health and ecological risk assessments determined that soil cleanup levels would be primarily based on ecological considerations.

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Doctors Chu and Triay are no longer at DOE. Those who are now are trying to breach the agreement and commitments made. There is no scientific basis to do so. Indeed, virtually all the new acts DOE says have since then been revealed—particularly that there is much more contamination at SSFL than previously believed—support more rather than less cleanup.

An EIS is to be a neutral, scientific document. This EIS sadly does not meet those standards. Instead it appears a political document, trying to provide cover for efforts to break solemn cleanup promises.

At the core of the EIS is the erroneous assertion that there is no risk, to public health or ecological receptors, of leaving the contamination not cleaned up, whereas there is inconvenience and cost to clean up as promised. However, the claims about risk are based on misrepresenting the risk based screening levels for human health, and by failing to even use risk based screening levels for ecological receptors. They are also based on improperly averaging and numerous other errors.

DOE has a long history of cutting environmental corners. That is what led to the contamination of SSFL and so much of the rest of the DOE national nuclear complex. A few years ago, DOE promised to change course, at least with regards SSFL, and committed to a full cleanup, in a legally binding agreement. Efforts to renege on those commitments must be reversed.

DOE has no authority to decide to not do the promised cleanup. The entire premise of the EIS, that the decision DOE is to make is how much of its pollution to remediate, is wrong. That power does not rest with DOE. The decisions that DOE purports in the EIS to be preparing to make are not in its discretion.

SCFS strongly opposes the EIS and all efforts by DOE to violate the AOC and its commitments to a full cleanup.

Our detailed comments, tied to specific parts of the EIS, are attached, as are supporting documents.

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- The Final EIS includes within the Conservation of Natural Resources – Open Space Scenario, an assessment of ecological risks, which includes ecological RBLSs.
- 623-13 The volumes in the Draft EIS have a sound engineering basis. DOE used the GIS (geographic information system) database for Area IV to identify on a point-by-point basis, any sample location that had an exceedance of a LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, develop areas and depth of exceedances, and then the calculation of the soil volume exceeding the LUT values. The depth of soil to be removed was determined by the deepest sample exceeding a LUT value or depth to bedrock (if all samples to bedrock exceeded LUT value) while the lateral extent of the soil to be removed around each sample was based on several factors as identified in Appendix D.
- Since the Draft EIS was prepared, DOE has independently recalculated the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data and recognizing the shallow soil depth over uneven bedrock across Area IV and the NBZ, DOE is not as uncertain about the upper limit of the soil volume estimate as it was at the time the Draft EIS was prepared. DOE's intent is not to alarm people, but it is true that the more soil removed from a remediation site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. DOE has not "contaminated all of Area IV" as the commenter alleges. Much of the observed "contamination" is TPH above 5 parts per million. DTSC has recognized based on the results of the soil treatability study that this is most likely naturally occurring organic matter, not TPH.
- 623-14 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response. Since the publication of the Draft EIS, DTSC has published, in September of 2017, the Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (DTSC 2017b), which includes a draft transportation study. The transportation related conclusions of the EIR are summarized in Chapter 2, Section 2.2.4, of this EIS. Both this EIS and the DTSC's Program EIR address the alternatives suggested by the commenter. As noted in Chapter 2, Section 2.2.4, of this EIS, the Transportation Feasibility Analysis (App J of the DTSC Program EIR) concluded that transporting soil by truck using the Woolsey Canyon Road was the most technically feasible and least environmentally impactful option for the transport of soil from SSFL and backfill to SSFL.

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Comparing DOEs Alternative 3 Proposed Radionuclide Cleanup Levels to the 2010 Administrative Order on Consent Look Up Table values

Radionuclide	DOE Alternative 3 Proposed Cleanup Levels (picocuries per gram)	2010 Administrative Order on Consent (AOC) Look Up Table (LUT) values (picocuries per gram)	How much larger are DOE proposed levels than the AOC LUT values?
Americium-241	400	0.039	10,256 times larger
Cesium-137	10	0.225	44 times larger
Cobalt-60	2.3	0.0363	63 times larger
Europium-152	5.1	0.0739	69 times larger
Europium-154	4.7	0.198	24 times larger
Europium-155	Not provided by DOE	0.231	N/A
Nickel-59	2,600,000	0.875	2,971,429 times larger
Plutonium-238	700	0.0254	27,559 times larger
Plutonium-239	640	0.023	27,826 times larger
Plutonium-240	Not provided by DOE	0.023	N/A
Strontium-90	1200	0.117	10,256 times larger
Thorium-228	4.1	4.27	~equal
Thorium-230	710	2.38	298 times larger
Thorium-232	74	3.44	22 times larger
Uranium-233	Not provided by DOE	2.18	N/A
Uranium-234	3200	2.18	1,468 times larger
Uranium-235	45	0.152	296 times larger
Uranium-238	240	1.96	122 times larger

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Comparing DOE's Alternative 3 Proposed Radionuclide Cleanup Levels to
EPA's Preliminary Remediation Goals for Suburban Residential Use

Radionuclide	DOE Alternative 3 Proposed Cleanup Levels (picocuries per gram)	EPA Preliminary Remediation Goals (PRG) (picocuries per gram)	How much larger are DOE proposed levels than the EPA PRGs?
Actinium-227	17	0.00864	1,968 times larger
Americium-241	400	0.0104	38,461 times larger
Bismuth-210	8,700	0.0128	679,688 times larger
Curium-243	56	0.00593	9,443 times larger
Cobalt-60	2.3	0.00806	285 times larger
Cesium-137	10	0.0303	330 times larger
Europium-152	5.1	0.0208	245 times larger
Europium-154	4.7	0.0195	241 times larger
Helium-3	28,000	0.0612	457,516 times larger
Nickel-59	2,600,000	19.5	133,333 times larger
Protactinium-231	93	0.00683	13,616 times larger
Lead-210	130	0.00301	43,189 times larger
Polonium-210	300	0.0161	18,634 times larger
Plutonium-238	700	0.00178	393,258 times larger
Plutonium-239	640	0.00615	104,065 times larger
Radium-223	500	0.00953	52,466 times larger
Radium-224	160	0.00721	22,191 times larger
Radium-226	3.3	0.00182	1,813 times larger
Radium-228	4.8	0.00174	2,759 times larger
Strontium-90	1,200	0.00361	332,409 times larger
Thorium-227	230	0.00909	25,303 times larger
Thorium-228	4.1	0.00706	581 times larger
Thorium-230	710	0.00182	390,110 times larger
Thorium-232	74	0.00174	42,529 times larger
Uranium-234	3200	0.00179	1,787,709 times larger
Uranium-235	45	0.00623	7,223 times larger
Uranium-238	240	0.00176	136,364 times larger

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Comparing DOE Alternative 3 Proposed Radionuclide Cleanup Levels to
EPAs Preliminary Remediation Goals for Rural Residential/Agricultural Use

Radionuclide	DOE Alternative 3, Proposed Cleanup Levels (picocuries per gram)	EPA Preliminary Remediation Goals (PRG) (picocuries per gram)	How much larger are DOE proposed levels than the EPA PRGs?
Actinium-227	17	0.0000713	238,429 times larger
Americium-241	400	0.00000466	85,836,910 times larger
Bismuth-210	8,700	0.000198	43,939,393 times larger
Curium-243	56	0.000000136	411,764,706 times larger
Cobalt-60	2.3	0.0026	885 times larger
Cesium-137	10	0.0000107	934,579 times larger
Europium-152	5.1	0.00544	938 times larger
Europium-154	4.7	0.00552	851 times larger
Helium-3	28,000	0.029	965,517 times larger
Nickel-59	2,600,000	2.43	1,069,959 times larger
Protactinium-231	93	0.000071	1,309,859 times larger
Lead-210	130	0.000135	962,963 times larger
Polonium-210	300	0.0002	150,000 times larger
Plutonium-238	700	0.00000014	5,000,000,000 times larger
Plutonium-239	640	0.000000136	4,705,882,353 times larger
Radium-223	500	0.0000727	6,877,579 times larger
Radium-224	160	0.000101	1,584,158 times larger
Radium-226	3.3	0.0000351	94,017 times larger
Radium-228	4.8	0.0000147	326,531 times larger
Strontium-90	1,200	0.000373	3,217,158 times larger
Thorium-227	230	0.0000715	3,216,783 times larger
Thorium-228	4.1	0.0000964	118,497 times larger
Thorium-230	710	0.0000346	20,520,231 times larger
Thorium-232	74	0.0000146	5,068,493 times larger
Uranium-234	3200	0.000032	100,000,000 times larger
Uranium-235	45	0.0000609	738,916 times larger
Uranium-238	240	0.0000299	8,026,755 times larger

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Estimated Radiation Dose from DOE's Proposed Alternative 3 Cleanup Levels

source for dose estimate: EPA Dose Compliance Calculator for Residential Exposure

Radionuclide	EPA Dose Estimate of DOE Proposed Cleanup Level (millirem/yr)	Equivalent to how many chest x-rays per year?
Actinium-227	151	75.5
Americium-241	2180	1090
Bismuth-210	10.1	5.05
Curium-243	238	119
Cobalt-60	11.3	5.65
Cesium-137	13.8	6.9
Europium-152	11.3	5.65
Europium-154	112	56
Helium-3	11,200	5,600
Nickel-59	5290	2,645
Protactinium-231	1240	620
Lead-210	3110	1,555
Polonium-210	5510	2,755
Plutonium-238	4190	2,095
Plutonium-239	4220	2110
Radium-223	126	63
Radium-224	7.13	3.565
Radium-226	47.9	23.95
Radium-228	184	92
Strontium-90	1540	770
Thorium-227	8.94	4.47
Thorium-228	9.20	4.6
Thorium-230	4140	2,070
Thorium-232	3330	1,665
Uranium-234	4350	2,175
Uranium-235	69.3	34.65
Uranium-238	333	166.5

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Estimated Risk from DOE's Proposed Alternative 3 Cleanup Levels
source for risk estimate: EPA Preliminary Remediation Goals for Urban-Residential Exposure

Radionuclide	EPA Risk Estimate of DOE Proposed Cleanup Level	How many times higher is this than the 10^{-6} goal?
Actinium-227	1.97×10^{-3}	1,000 times
Americium-241	3.83×10^{-3}	1,000 times
Bismuth-210	4.91×10^{-1}	100,000 times
Curium-243	9.45×10^{-3}	1,000 times
Cobalt-60	2.85×10^{-4}	100 times
Cesium-137	3.30×10^{-4}	100 times
Europium-152	2.45×10^{-4}	100 times
Europium-154	2.41×10^{-4}	100 times
Helium-3	3.67×10^{-1}	100,000 times
Nickel-59	1.25×10^{-1}	100,000 times
Protactinium-231	1.35×10^{-2}	10,000 times
Lead-210	4.22×10^{-2}	10,000 times
Polonium-210	1.85×10^{-2}	10,000 times
Plutonium-238	3.25×10^{-1}	100,000 times
Plutonium-239	9.89×10^{-2}	10,000 times
Radium-223	5.11×10^{-2}	10,000 times
Radium-224	2.20×10^{-2}	10,000 times
Radium-226	1.81×10^{-3}	1,000 times
Radium-228	2.75×10^{-3}	1,000 times
Strontium-90	2.83×10^{-1}	100,000 times
Thorium-227	2.50×10^{-2}	10,000 times
Thorium-228	5.81×10^{-4}	100 times
Thorium-230	3.23×10^{-1}	100,000 times
Thorium-232	3.47×10^{-1}	100,000 times
Uranium-234	8.33×10^{-1}	100,000 times
Uranium-235	7.23×10^{-3}	1,000 times
Uranium-238	1.28×10^{-1}	100,000 times

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Commenter No. 623 (cont'd): Southern California
Federation of Scientists

Detailed Comments by Southern California Federation of Scientists

Chapter 1

1.0 This section misstates the NEPA requirements

NEPA applies only to *discretionary* agency actions. DOE has no discretion over how much of the contamination in Area IV and the NBZ it must clean up. That is dictated by the AOC and by DTSC. The entire purpose of the EIS is erroneous and outside of NEPA.

DOE says the EIS is designed to provide information to DOE decision makers as to what cleanup they will choose to conduct, but DOE personnel have no power to decide how much cleanup they will do.

This section admits that the majority of the contamination is from chemicals. However, DOE has zero authority to decide how much of the chemical contamination to clean up. Under RCRA, DOE is merely a regulated entity, subject to the regulation of EPA, or in the case of a state such as California where that authority has been delegated. RCRA contains a waiver of sovereign immunity by federal agencies such as DOE. In short, even in the absence of an AOC, DOE has no discretion as to how much of its chemical contamination to clean up; that rests solely with its regulator, DTSC.

However, there is a legally binding AOC, which mandates how much of the chemical and radioactive contamination must be cleaned up (all, with very narrow exceptions) and prohibits certain alternatives (i.e., no leave in place alternatives shall be considered). Again, DOE has no discretion, about either the radioactivity or chemicals. The AOC binds DOE to its terms and to DTSC as the regulator.

The only aspect of the cleanup about which DOE might have some discretion is *how* to achieve the required cleanup to background, not *whether* to comply with the AOC and DTSC's RCRA direction. It might also have some discretion about transportation alternatives (routes, conveyances). This is what DOE promised in 2012 would be the scope – not whether to clean up to background, as required, but how. However, the very purpose of the EIS as put forward by DOE now violates that promise, violates the AOC, violates RCRA, and is at variance with NEPA.

In summary, the EIS addresses almost entirely matters that are not in DOE's discretion in the first place, at variance with NEPA's fundamental purpose, and violates the AOC and past DOE promises.

The section also ignores the central cleanup requirement, the AOC

Strikingly, DOE fails to mention the AOC, which is the binding requirement for the cleanup. It mentions NEPA and DOE implementing regulations and the District Court decision, but what controls the cleanup is the AOC. This silence, except for a few tiny references buried elsewhere

623-15 The commenter is in error with the statement that the “EIS contemplates not cleaning” up groundwater. As described in Chapter 2, Section 2.6.3 of the Draft EIS, DOE assessed active groundwater remedies, including pump and treat, soil vapor extraction, and removal of the strontium-90 source. Further DOE evaluated monitored natural attenuation for locations with low concentrations of contaminants that have a history demonstrating decreasing concentrations over time (e.g., the Metals Clarifier TCE plume and the tritium plume).

These alternative remedies are fully within the purview of the 2007 Consent Order. As noted in Chapter 2, Section 2.6, of this EIS the groundwater cleanup standards are risk-based, meaning the concentrations of any contaminants remaining in groundwater following remediation will pose an acceptable risk to future groundwater users. Also, note that DTSC, in its Program EIR, considered monitored natural attenuation for some groundwater plumes.

At this time, DOE is using promulgated maximum contaminant levels (MCLs) as the cleanup goals for groundwater.

623-16 A groundwater risk assessment was not performed at DTSC's request because at the time of publication of the Final EIS, the scenarios under which exposure could occur were still under development. As long as impacted groundwater remains within the boundaries of SSFL, and computer models show that to be the case, there is no potential for exposure to groundwater on site. (The open space use of SSFL guaranteed by the two Grant Deeds of Conservation Easement and Agreements (conservation easements) prohibit any receptor/activity that would use groundwater on site.) Without a receptor, there cannot be a risk.

DOE recognizes that there have been times in the past that some wells have been more productive than others. However, those times coincide with wet rainfall periods. During the more recent drought years, wells that had once been productive, were either dry or produced much less water. Wells that once produced 200 gallons per day, now produce 20 gallons. And it is much easier today to pump wells dry. In order to supply water for domestic purposes the wells must provide a reliable water supply during all rainfall conditions. Such is not possible with Area IV of SSFL.

623-17 DOE has performed additional groundwater investigations and reported the results in the Draft RCRA Facility Groundwater Remedial Investigation Report, Area IV, Santa Susana Field Laboratory, Ventura County, California (CDM Smith 2018a). Chapter 3, Section 3.4 of this Final EIS was updated with information from the draft groundwater

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in the EIS (which generally do not acknowledge that DOE cannot change the AOC absent approval from its regulator, DTSC), pervades the EIS and is a fundamental flaw.

Essentially, the EIS pretends that DOE has the discretion to choose any level of cleanup it wishes, and ignores both the legally binding nature of the AOC and the fact of DTSC authority.

The EIS assertion that contaminants are concentrated near certain facilities undercuts DOE's improper use of averaging

This section also makes the assertion that contaminants "are concentrated near certain facilities, rather than being evenly distributed across the site." This statement undermines DOE's efforts to average contaminants and purported risk over large areas, as much as 100 acres.

At the same time, the statement seems to contradict DOE maps in the EIS. It claims essentially all of Area IV and the NBZ is contaminated, part of what appears an effort by DOE to inflate the soil volume and truck estimates to create an argument for not cleaning up all the contamination, as promised in the AOC.

1.1 The Purpose and Need for Agency Action Statement is Inaccurate and Improper

In its 2012 scoping statement DOE expressly stated

*What is DOE's "purpose and need" for action?
DOE needs to complete cleanup of Area IV and the Northern Buffer Zone in compliance with regulations, orders and agreements, including the 2007 Consent Order (groundwater) and the 2010 Administrative Order on Consent (soil).*

But now in its EIS, DOE has dropped the last phrase, indicating, as is indeed the case, that it intends to breach the AOC.

The second sentence in the EIS purpose and need section mentions in passing "orders and agreements" but does not directly cite the Administrative Order on Consent.

The third sentence claims that the purpose and need is "to clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers." (emphasis added). But that is not the purpose and need for agency action. It is to comply with the requirements of the AOC and the directives of its regulator, DTSC, which are to clean up to background. The AOC bars a supposed risk-based cleanup. DOE acknowledged all this in its 2012 scoping document, but now breaches it.

p. 1-3 The EIS asserts even though no NEPA review was conducted for any of the prior decommissioning and related activities, this was legal, pursuant to categorical exemptions. This

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remedial investigation report, including information on the magnitude and extent of the existing groundwater contamination plumes in Area IV and the NBZ. The report is included as a reference for this Final EIS and is available for review on DOE's website.

The commenter is incorrect in its statement that tritium concentrations 2010-2014 are essentially unchanged. As described in Section 3.4.3.6, of this Final EIS, and provided in the table below, the tritium concentrations in groundwater are decreasing. DOE is also not aware of a California of Health Services study that concluded tritium concentrations were not decreasing.

Well	2010	2014	2016	2018
RD-90	41,000	40,000	37,200	31,600
RD-95	59,700	28,000	27,400	31,000

623-18 There have been no violations of stormwater limits from the Area IV outfalls in recent years. (Although there have been two exceedances for iron and one for toxicity from an outfall shared between multiple areas, including Area IV.) Perchlorate is found at concentrations near its MCL at the Former Sodium Disposal facility and off-site wells do not show its presence. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

623-19 The Former Sodium Disposal Facility was operated in compliance with the rules of its day. When the rules under RCRA changed, the operation was shifted to the Hazardous Waste Management Facility. The prior removal actions at the facility have addressed all surficial contamination. There is no "extensive contamination" today. What remains today are solvent wastes that lay at the bedrock interface below ground surface. In Section 4.4 of the EIS, DOE assesses pump and treat, enhance pump and treat, and soil vapor extraction as potential remedies for the Former Sodium Disposal Facility. The Building 56 landfill was primarily used for the placement of bedrock excavated to create a basement for a proposed building. It was used secondarily for the placement of drums and building materials. All waste materials have been removed from the landfill site. DOE is not aware of any promises made specific to the landfill that the "landfill would be exhumed and the contaminants removed." DOE proposes to address all contaminated areas in Area IV, including the landfill, per the issues each area presents to human health and the environment.

623-20 When asked by the community to provide examples of facility cleanups in California similar to SSFL, DTSC presented both of these facilities as examples to the community. It was on this basis that DOE selected McClellan AFB and Hunters Point as

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is false. These activities required NEPA review and did not get it. Artificial segmentation is illegal under NEPA.

The EIS very misleading states that operating research reactors and conducting nuclear research resulted in *some localized* [emphasis added] releases of chemicals and radionuclides to the soil, bedrock, and groundwater.” This is indicative of a fundamental failure in the EIS – the inability to be honest about the contamination DOE created. The statement is directly contradicted by the EIS itself, which asserts that almost the entirety of Area IV is contaminated.¹ (The LUT values are set at levels that are above background, i.e., anything above them is higher than would have been there had DOE not contaminated the site.) Additionally, DOE claims it contaminated 1,413,000 cubic yards of soil (p. 2-20), a very large amount. DOE can’t have it both ways. If there are only “some localized releases,” then cleanup is a modest undertaking. If on the other hand it contaminated almost all of Area IV and vast volumes of soil, as it also asserts, then the releases are not “some localized” releases.

This points to a central failure of the EIS—it is more a piece of propaganda to try to buttress DOE’s efforts to break the AOC and its commitments to a full cleanup than it is an honest and accurate environmental assessment. On the one hand, DOE wants to claim there is very little contamination; on the other hand, it inflates the level of contamination to argue that cleaning it all up would require large numbers of truck trips, etc. An EIS is supposed to be an honest environmental assessment – a work of science. It is not supposed to be a piece of PR. That is what this EIR appears to be.

p. 1-4 inaccurately describes the origins and contents of the EA and the subsequent lawsuit that found DOE had violated NEPA. Concerned that DOE was conducting all of its closure operations at SSFL with zero NEPA coverage, then-Senator Barbara Boxer repeatedly complained that this violated the law. NGOs made similar complaints, and filed FOIA requests that resulted in the disclosure that DOE was essentially naked in terms of NEPA coverage. Given those external criticisms, DOE decided to perform some NEPA review – an Environmental Assessment, a lesser level of analysis – and issued the EA.

The EA proposed to leave behind, not cleaned up, 98 or 99% of the radioactive contamination DOE estimated at the site. US EPA and numerous others heavily criticized it. The City of Los Angeles, the Natural Resources Defense Council, and the Committee to Bridge the Gap filed suit, which was successful. The judge issued a stinging rebuke of DOE. None of this is disclosed in the EIS. The EIS should be rewritten to accurately describe this history.

The Conti Order was issued in 2007. A decade has passed without DOE preparing the EIS. DOE simply dragged its feet. This should be disclosed in the EIS finally issued.

The statements about the 2007 Consent Order are misleading. Groundwater is not to be cleaned up to risk assessment levels but to Maximum Contaminant Levels (MCLs) from the Safe Drinking Water Act. Furthermore, DOE’s characterization of cleaning up to risk assessment

¹ See, e.g., Figure 2-1, Extent of Radiological and Chemical Constituents Above AOC Look-up Table Values.”

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comparative sites. Table D-6 provides a comparative table of soil cleanup values for SSFL RBSLs, Hunters Point, and McClellan AFB vs. AOC LUT values. While the selected remedy at McClellan was to an industrial/commercial standard, the McClellan ROD provided evaluation of both industrial/commercial and residential cleanup levels. The values cited in Table D-6 are for unrestricted use based on a residential exposure scenario that included an ingestion of homegrown produce pathway. The Hunters Point values are also for a residential exposure scenario including ingestion of homegrown produce.

623-21 DOE is committed to a safe and effective cleanup of Area IV and the NBZ. Regarding the new information about contamination at SSFL (Area IV), the characterization efforts of EPA and DOE revealed that the site was not extensively radioactively contaminated as many believed, but concentrations of chemicals exceeding the AOC LUT (background) values are more widespread. If human health risk is considered and RBSL values are employed as cleanup criteria, the areas (and soil volumes) needing to be remediated are much smaller than that needing cleanup using the AOC LUT values as cleanup criteria. This is shown in Chapter 2, Figures 2-3, 2-5, 2-6, and 2-7 and Table 2-5 of this Final EIS.

DOE disagrees that all of the alternatives violate the AOC and basic principles of environmental remediation. Refer to Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD, which describes how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC, using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values). This section also discusses the two alternatives that take into account future land use and human health and ecological risks based on use the application of risk-based screening levels.

623-22 The commenter is mistaken. Nowhere in the EIS does DOE assert “that there is no risk, to public health or ecological receptors”. The EIS concludes otherwise. The EIS identifies locations across Area IV that need to be cleaned up due to predicted risk to human health. The exemption process presented in the EIS identifies locations that need to be cleaned up to protect ecological receptors. The ecological risk process is described further in Section 4.5 of this Final EIS, and the Biological Assessment. The commenter is again wrong in how DOE conducted the risk analysis. The risk analysis was performed per EPA guidance in which averaging is the normal practice [*Supplemental Guidance to Risk Assessment Guidance for Superfund: Calculating the Concentration Term*. Publication 9285.7-081 (EPA 1992)] Please see the response to comment 623-103.

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levels leaves out the fundamental requirement—which is that DTSC and EPA require those risk levels to be based on the land uses allowed under local zoning and general plan designations, which for SSFL are agriculture and also residential (with garden). Even were there no 2010 AOC, DOE is violating the 2007 Consent Order by attempting to claim it is doing risk assessment levels when the risk based levels it purports are orders of magnitude higher than the true risk levels allowed for SSFL land use.

The box on p. 1-4 further misstates the 2007 Consent Order. It states that the 2007 Consent Order requires cleanup to a future residential land use. This is false. There is no such statement in the Consent Order. It merely requires cleanup pursuant to DTSC’s procedures, which in fact defers to local zoning and general plan designations, which as indicated above, includes agricultural uses, the most protective of cleanup standards. DOE tries to get around this by saying that other plausible receptors were also identified, though the example it gives is of a lesser receptor, recreational, not the one that requires the actual major cleanup, agricultural. The statement is very misleading. Nowhere in the Consent Order does it say clean up to residential standards. And even if it did, DTSC’s risk assessment methodology (which covers agricultural as well), includes the backyard garden component of the residential scenario, which DOE refuses to include in the EIS, thus violating the 2007 Order, even if one accepted as true DOE’s claim that the Order is based on the residential scenario.

P. 1-5 misrepresents by not explaining why the state did not support listing on the NPL. It was because the state had concluded under its own procedures a cleanup that was as protective or more protective than EPA would impose under CERCLA would be required. It wasn’t, as implied in the paragraph, that the state didn’t think the site was that badly contaminated as to qualify for Superfund, the most contaminated sites in the country. To the contrary, the EIS should disclose what the Superfund listing recommendation meant – it meant EPA had concluded there was significant evidence that this is one of the most polluted sites in the nation and that it should be on the National Priority List, i.e., a top priority for thorough cleanup.

p 1-6 makes it sound as though just two radionuclides were found, with a couple of exceptions. The EIS should list all the radionuclides found above background.

The box on p. 1-6 once again tries to spin data rather than present them candidly. First of all, the EIS misleads by saying both man-made and naturally occurring radionuclides were detected, implying that the latter were found at naturally occurring levels. However, what EPA found was that uranium, thorium, radium, and numerous others which do occur in nature but also were used at SSFL for nuclear purposes were found at levels exceeding what is found in background. In other words, there was contamination from these materials. Indeed, DOE operated, for example, a uranium fuel fabrication facility, used thorium for reactor fuels, and possessed significant amounts of radium at SSFL, which apparently resulted in contamination by these materials. DOE should not try to mislead the public – or a court that may have to review the adequacy of its NEPA compliance – by referring to materials as “naturally occurring” when they can occur in nature but are at SSFL, not through nature, but by contamination caused by decades of DOE’s poor environmental practices. DOE compounds this misrepresentation by then only citing the EPA statistics about man-made radionuclides that have contaminated SSFL at levels above background, leaving out its figures for radionuclides such as the thoriums, uraniums, etc.

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623-23 DOE disagrees that this Final EIS does not adequately address the 2010 AOC. Chapter 1, Section 1.3, of this EIS provides a history of the site, and with the information in Section 1.4 includes a discussion of the actions, activities, and regulatory requirements that have led to or guided DOE’s cleanup to date and preparation of this EIS. The 2010 AOC and the activities it outlines for soil remediation are mentioned prominently in that discussion, including in the text box dedicated to the 2010 AOC to which this comment refers. Furthermore, Chapter 2, Section 2.3.2 of the Final EIS describes the Cleanup to AOC LUT Values Alternative, which incorporates the technical elements of the 2010 AOC, using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values). Again, as contemplated by the AOC, DOE has conducted this NEPA evaluation for site remediation. As required by NEPA, DOE objectively considered various reasonable alternatives to achieve the remediation goal. One of those alternatives addressed the technical elements of the 2010 AOC while other alternatives were evaluated that, would leave Area IV and the NBZ in a state that was protective of human health and the environment.

DOE also notes in Section 2.2.1 of the Final EIS, Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the requirements of the AOC to better meet cleanup objectives. DOE would engage DTSC in discussions about such changes in order to implement any soil remediation alternative. Those changes would be accomplished in accordance with Section 8.0 of the AOC, which acknowledges that the Order may be modified by mutual agreement of the parties.

623-24 The commenter’s statement that contaminants “are concentrated near certain facilities” is a correct one. This was also a EPA conclusion for the radionuclide distribution. Figure 2-5 of the Draft EIS illustrates this. The commenter’s statement that DOE “efforts to average contaminants and purported risk over large areas” is incorrect. To perform the risk assessment, DOE used 10,000 square meter or 2.5 acres, not 100 acres as the commenter states, as the exposure area. In conducting a cleanup under a standard risk assessment as DOE would when implementing a risk-based cleanup, locations with higher concentrations are located first and targeted for cleanup. Averaging of remaining soil is then performed to assess the post cleanup risk. The map produced by DOE illustrated where any chemical may exceed a LUT value; however, exceeding a LUT value is not necessarily evidence of contamination nor is it an indication of risk posed to an onsite or adjacent land user. Please see Section 2.5, “Toxicity of Soil Contaminants,” of this CRD for additional information on this topic.

623-25 Please see the response to comment 623-5.

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EPA says directly (see Fact Sheet it issued when releasing its report):

Of the [3735] samples a total of 500 samples contained concentrations of radioactive materials exceeding background levels. Many samples contained concentrations of two or more radionuclides that exceed background. Both man-made and naturally occurring radionuclides were detected. Man-made radionuclides were detected in 423 of the 500 samples, with naturally occurring radionuclides detected in 105 of the 500 samples; some samples had both man-made and naturally occurring radionuclides.

DOE should quote this, in its entirety, and should include the table from p. 3 of EPA's fact sheet showing the exceedances.

The running problem with the EIS being more spin than science is found in the statement, "man-made radionuclides were not detected above background levels in more than 88% of the total number of samples." As indicated above, that leaves out the uranium, thorium, etc. But the focus on the samples that weren't contaminated is indicative of the underlying problem with the EIS—constant efforts at minimizing the recognition of the environmental harm DOE has done with decades of accidents, spills, and releases, while trying to inflate the supposed impacts of remediating the toxic mess DOE made. Would the reader feel reassured by a doctor who said, "88% of your body doesn't have any cancer?"

A more accurate statement would be "Every seventh soil sample taken by EPA found radiological contamination. And the great majority of soil samples found chemical contamination."

Footnote 6 on p. 1-7 misrepresents the AOC. EPA made a controversial recommendation, but that doesn't change the AOC, which is explicit: the LUT values are to be based on the values found and the detection limits employed in the EPA background study (for radiation) and DTSC background study (for chemicals). There have been attempts to weaken those requirements by saying one should ignore the detection limits from the background studies and instead use far weaker detection limits that multiple laboratories (rather than the best labs available) can routinely employ (rather than what they can achieve if asked to do as well as possible).

The box on p. 1-7 misrepresents the AOC. First of all, it must be said that relegating the AOC to this single page or two is part and parcel of DOE's efforts to push the AOC far to the margin of the cleanup process. The entire cleanup is governed by the AOC. DOE can't violate it. But it constantly tries to make it seem as though the AOC barely exists. The EIS should begin with the AOC; make clear all its key components, without spin; identify that it is legally binding and that DTSC by terms of the AOC is in charge; and then restrict the EIS to how to carry it out, as previously promised.

Nowhere is it stated that the AOC is a legally binding set of obligations; that DTSC co-signed it; that DTSC is established as the party that regulates DOE in the cleanup and must approve all DOE proposals, all of which must comply with the AOC. These deficiencies are stark and must be remedied.

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623-26 Your comment has been included in the Administrative Record for the EIS. It is DOE's position that the appropriate level of NEPA review was conducted for prior decommissioning activities. As stated in Chapter 1, Section 1.3, "As appropriate, these activities were covered by categorical exclusions in accordance with DOE's "NEPA Implementing Regulations" (10 CFR Part 1021, Appendix B to Subpart D)." Categorical exclusions are a form of NEPA review.

623-27 The EIS does not assert that "almost the entirety of Area IV is contaminated". The EIS presents areas and volumes exceeding the current LUT values. However, exceeding a LUT value is not necessarily an indication of contamination. For example, soil treatability studies show that up to 500 ppm of soil with TPH as the only contaminant. The treatability study show that TPH results could contain naturally occurring organic matter. An issue that DTSC is in agreement with. Exceeding the 5 ppm TPH LUT value is not an indication of contamination. The statements that contaminants are generally located within a limited area of Area IV and that application of the LUT values would result in removal of the quantity of soils identified are not in conflict.

623-28 DOE believes that Chapter 1, Section 1.3 of this EIS accurately and adequately describes the events preceding and effectuating preparation of this EIS. This information, along with the remainder of Chapter 1, provides the context necessary for the public and decision-makers to understand the purpose and need for DOE's Proposed Action and alternatives for remediation of those portions of SSFL for which it is responsible. DOE's current focus is to complete the cleanup of the remaining contamination in those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. To that end, the current condition of Area IV and NBZ, not the past incidences within Area IV, is relevant.

623-29 The text box on page 1-4 of the Draft EIS stated that residential and other plausible land use scenarios will be considered. For groundwater remediation, Chapter 2, Section 2.6 of this Final EIS describes how DOE would clean up groundwater in accordance with the requirements of the 2007 CO and that technologies are being identified and evaluated through the applicable RCRA process. Maximum contaminant levels (MCLs) from the Safe Drinking Water Act that are used as a basis for groundwater protection. Most MCLs are based on risk to a drinking water user.

However, DOE respectfully disagrees with the concept that the future land use must be considered suburban residential with garden or agricultural. At the time the Draft EIS was issued, the landowner, Boeing, had committed to maintaining the land it owns at SSFL, which includes Area IV and the NBZ, as open space. That commitment

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The statement that EPA is responsible for establishing the LUT values is not quite correct. See p. 2 of Attachment B of AOC. "US EPA, in the course of conducting its radioactive contaminant background study, will determine local background levels and detection limits." EPA did this in its Background Study. It set Background Threshold Values (BTVs) which represented the higher of the detection limits it established in that study and the background values it could measure. The AOC says that those values from the background study shall become the LUT values. The EIS does not state this correctly.

623-32 cont'd

The box states that "chemicals and radionuclides in the backfill soil must meet the same LUT vales." DOE knows this is not true. If there is any difficulty finding such soil (e.g., there is some soil that might very marginally exceed LUT values for a couple of constituents, like the Gillibrand soil), DOE and DTSC are to consult and DTSC is to choose the best available soil. Indeed, DOE, recognizing this, has written to DTSC to do precisely that. This is another example of trying to make it seem as though the AOC can't be met, when it can. The false statement needs to be corrected.

623-33

The box also includes the following: "No 'leave in place' alternative (onsite burial or landfill) is allowed." Once again, DOE misrepresents the AOC it signed; and in an EIS has an obligation to accurately present the facts. The prohibition of consideration of "leave in place" alternatives is actually a separate prohibition from the ban on consideration of onsite burial or landfilling, as seen in the quote below from the AOC:

Cleanup to local background means removal of soils contaminated above local background levels
No "leave in place" alternatives will be considered
No on-site burial or landfilling of contaminated soil will be considered

623-34

One can understand why DOE would wish to misrepresent this AOC requirement, because the bulk of the EIS is filled with DOE's intention to leave in place hundreds of thousands of cubic yards of contaminated soil, in violation of this AOC provision. Note that it bars not just leaving any contaminated soil in place, but even consideration of such an alternative. Yet all alternatives in the EIS consider leaving in place vast amounts of the soil not cleaned up.

623-3 cont'd

p. 1-8 in passing mentions that many of the chemical contaminants in soil were due to "burning of wastes" but does not disclose the true nature of this – the illegal burning of radioactive and toxic wastes in open-air burnpits for years, resulting in widespread aerial deposition over not just SSFL but outlying areas as well. There should be full disclosure of this, as without its recognition, the problem of the widespread contamination cannot be understood and addressed.

623-35

The assertion that the soil sampling by DTSC and EPA was used to estimate 1,413,000 cubic meters of contaminated soil creates a misimpression that DTSC and EPA made the estimate and that the estimate has any validity. In fact, DOE and its contractors performed the estimate, and it is wildly inflated. As SCFS indicated in its scoping comments on the EIS, numerous errors to inflate the numbers were made. If there is a surface sample that is contaminated, DOE assumed

623-13 cont'd

was put into effect via two Grant Deeds of Conservation Easement and Agreements (conservation easements), legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

623-30 SSFL Area IV is not "one of the most polluted sites in the nation." Soil cleanup actions have occurred throughout the history of operations in Area IV. Chapter 3, Section 3.2.5.3, of the EIS provides several examples of the prior cleanups. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV;" of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

EPA and DTSC decided not to list SSFL on the National Priorities List but instead to have State regulations govern the cleanup standards and process. Subsequently, the 2010 AOC (with respect to soil) and the 2007 Consent Order (with respect to groundwater) defined the parameters for the cleanup. DOE is committed to a remediation of the SSFL Area IV and the NBZ to levels that will provide for protection of public health and the environment.

623-31 DOE believes that the information in Chapter 1, Section 1.4 of this EIS, including the text box, presents an accurate summary of the cited EPA data (EPA 2012; HGL 2012b). This section states that "Cesium 137 and strontium 90 were the two site-related radionuclides most frequently observed in EPA's samples." The text does not imply that these were the only two radionuclides observed. More detailed data are presented and used in Chapters 3 and 4 of this EIS and their supporting appendices.

The EPA in its final report of soil radionuclide sampling in Area IV of SSFL (HGL 2012b) indicated that the uranium and thorium decay series radionuclides that were above the radiological trigger level (RTL) were mostly from naturally occurring radioactive material (NORM) origin and not related to site contamination. The report stated:

"For Round 1 sample results, only four NORM RTL exceedances warranted collection of step-out samples during Round 2. Several instances were identified where NORM RTL exceedances were associated with collocated site-related radionuclides. In these instances, Round 2 step-out samples were collected and analyzed to characterize potential site-related contamination." and: "The evaluation of NORM RTL exceedances produced few results considered potentially site related,"

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contamination all the way to bedrock even if there were no data that was the case. If a particular sample was contaminated, DOE presumed contamination laterally all the way to bedrock outcroppings, even if there were no data to support that. This is unscientific and appears designed to buttress efforts to scare the public about trucks rather than to try to reasonably evaluate environmental impacts.

p. 1-8 regarding future of Area IV is false and misleading. Boeing does not decide the future land use of those areas, and for purposes of determining cleanup levels, a Responsible Parties' desires about future land use are irrelevant in terms of EPA or DTSC cleanup practice, which rely heavily instead of local government's land use designations. The County of Los Angeles and a number of other entities have major roles. As DTSC made clear in its 2010 Response to Comments on the Agreement in Principle, DTSC relies on local zoning and general plan designations, which allows in the SSFL case agricultural use, which requires the strictest cleanup standard.

Responsible Parties do not get to dictate cleanup levels for pollution on their land by declaring they will restrict its future use. If that were the case, then they could pollute at will and never have to remediate; all they would have to do is say they'll put a fence around it or otherwise restrict it. EPA guidance (see, e.g. Land Use in the CERCLA Process), does not identify a Responsible Party's desires or supposed intentions for future land use as even one of the factors to consider in determining prospective future land use for cleanup standard determinations. Again, if it were up to the polluter, its pollution would never get cleaned up; they would just restrict the land and walk away, which is not allowed.

The statement that Boeing has indicated that it is "committed to cleanup to a standard that is equivalent to a suburban residential standard" is false. The referenced document in fact shows that Boeing is pushing for cleanup to a standard that it is orders of magnitude less protective than a suburban residential standard. It does this, as does DOE throughout the EIS, by leaving out the required backyard garden component of the suburban residential standard.

Once again, it is not the polluter that picks the cleanup standard for its pollution; it is DTSC, the regulator. Throughout the EIS, DOE misleadingly suggests that the polluters (Boeing or DOE) get to decide how much of the contamination they created they must clean up. The polluter does not get to decide. The regulator – DTSC – decides. This is a fundamental flaw of the EIS.

p. 1-9 It would appear from 40 CFR 1508.5, quoted in the box on this page, that DOE has violated the applicable regulations by naming the Santa Ynez Band of Chumash Indians as a cooperating agency. **Those regulations, as DOE acknowledges by the direct quote on this page from them, only allows naming an Indian Tribe as a cooperating agency "when the effects are on a reservation."**

The reservation of the 154-member Santa Ynez Band of Chumash Indians is located north of Santa Barbara, *more than a hundred miles from SSFL*. The effects being considered in the EIS are in no fashion on the Santa Ynez reservation. The Cooperating Agency status is thus illegal and should be withdrawn.

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EPA did not provide a list of samples that exceeded the RTL for the uranium and thorium decay series radionuclides that were or were not considered site related and did not include any results for them in their list of Radiological Areas of Interest. Therefore, an evaluation was performed in 2015 to identify which samples that exceed the LUT values for the uranium and thorium decay series radionuclides appear to be NORM origin and which appear to be site related. A Technical Memorandum Evaluation of Naturally Occurring Uranium and Thorium Decay Chain Radionuclides in Santa Susana Field Laboratory Area IV Soils (Rucker 2015) was issued in August 2015 and was used in developing the Site Remedial Action Plan. This reference has been cited and referenced in Chapter 3, Affected Environment, in this Final EIS. The evaluation determined that no Th-232 results exceeded its LUT value. Of the 13 sample locations that exceeded the LUT values for uranium 234, uranium 238, or both, 4 were determined to be from NORM origin and 9 were determined in the evaluation to be from site processes based on their ratios with long-ingrowth daughters and/or ratios of the uranium isotopes. Seven of the nine locations whose concentrations were determined to be from site processes were from Subarea 7; one was from Subarea 6 and one was from the Northern Buffer Zone. The results for all but one of the locations were from surface soil. The one exception was from a sample taken from the 1 to 2.3 foot depth.

As discussed in Appendix G of the Draft EIS, natural uranium and thorium decay chain radionuclides contribute a major portion of the impacts to human health that could be experienced by an onsite suburban resident or recreational user. The variability in natural background from location to location is significant as evidenced by site uranium and thorium impacts being less than those from background and masking the incremental impacts from site-related radionuclides when viewing the total radiological impacts. The evaluation of uranium and thorium origin mentioned in the previous paragraph was performed after the risk assessment was performed for the Draft EIS. Therefore, impacts were shown in Appendix G and Chapter 4, Section 4.9, of the Draft EIS, with and without all uranium and thorium decay chain radionuclides. For the final EIS, Uranium was included in the statistical evaluation for identification of Contaminants of Concern (COCs) by subarea by comparison to background levels and frequency of detection in the Radionuclide Data Assessment Report (Leidos 2018a). The three subareas where uranium was identified in the report above a being process related had UCL95 values less than the UCL95 value for uranium in background soil and was therefore eliminated as a COC. In this Final EIS, by not including uranium in the risk impact assessment, introducing a net negative impact from uranium has been avoided.

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Great concern has been expressed, by the public as well as by the Los Angeles and Ventura governments, about potential motivation for the involvement by the Santa Ynez Band, which operates a large casino operation. Were they to be able to obtain SSFL land and build casinos on it, they could be extraordinarily lucrative, as the current casino is far from the LA metropolitan area. The potential for a conflict of interest – helping the RPs avoid cleanup expenses in hopes perhaps of obtaining part or all of the SSFL land – would undercut key aspects of NEPA. Those conflicts need to be disclosed in the EIS. Furthermore, the potential environmental impacts of this cooperation between the Santa Ynez Band and the Responsible Parties that could result in a casino with all that goes with it needs to be analyzed. (A Boeing statement in a letter of what it claims to intend to do with the land has no binding effect, of course.)

We also note that the EIS cites to several documents by a lobbyist and lawyer for the Santa Ynez Band, Mr. Cohen, but when one goes to the cited reference, one gets a notice that DOE is withholding the record, citing attorney-client privilege. Mr. Cohen represents the tribal casino and related interests; he does not represent DOE. DOE cannot make a claim of attorney-client privilege for a communication from Mr. Cohen. This creates a further impression of possible secret collusion; in any case, documents cited in an EIS must be available for public scrutiny.

Section 1.6, “Decisions to be Supported,” is fundamentally wrong, and the error is the key error in the EIS. It states that the “potential environmental impacts presented in this EIS, along with public input, cost, policy and other factors, will be considered by **DOE decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation for implementation.**” DOE officials do not get to select alternatives for cleaning up the contamination DOE created in soil, buildings, and/or groundwater. DOE signed an AOC, which mandates what that cleanup is to be. It has no power to ignore the AOC. And DTSC is the regulator, and enforcer. Furthermore, even in the absence of the AOC, DOE has zero authority over how much chemical contamination to clean up; that is solely DTSC power, delegated to it under RCRA, with which DOE must comply. The fundamental basis of the EIS is erroneous.

[Again, the EIS misstates the 2007 Consent Order, which does not require a risk-based cleanup approach; groundwater is to be cleaned up to MCLs. Only where MCLs don't exist for particular contaminants will risk-based cleanup levels be developed.]

Section 1.8.1 erroneously lists the 2003 EA as a related NEPA document. It was struck down by the court in 2007.

§1.8.2 is a direct affront to DTSC and misrepresents who controls the cleanup decisions. DTSC's EIR is given a mere 3 sentences, listed as a “related CEQA document.” In fact, the EIS is irrelevant, as DOE does not have the authority to make the cleanup decisions evaluated in the EIS. DTSC controls – both through the AOC and even in its absence, through its RCRA authority.

§1.8.3 More particularly, this section says DOE “may” prepare multiple SRAIPs, including separate ones for chemicals they claim will naturally degrade. No it may not. This violates the AOC, which requires no “leave in place” alternatives. DOE also says it may do separate SRAIPs

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623-32 Footnote 6 in Chapter 1 of the Draft EIS (footnote 13 of the Final EIS) factually represents information included in the Final Technical Memorandum, Look-Up Table Recommendations, Santa Susana Field Laboratory Area IV Radiological Study (HGL 2012c), quoting the relevant passages from the source document. EPA was providing the technical expertise for which it was engaged and identifying potential issues with the implementation of the 2010 AOC.

Regarding the statement about EPA establishing LUT values, in this Final EIS, the text box in Chapter 1 regarding the 2010 AOC was revised to more accurately reflect the language from the 2010 AOC regarding establishment of the LUT values.

623-33 As described in the 2010 AOC, chemicals and radionuclides in the backfill soil must meet concentration limits established in the LUTs. DTSC does have the authority to change the backfill concentration limits. DOE has initiated consultation with DTSC on this subject, as is required by the 2010 AOC. The responsibility for identifying backfill ultimately lies with DTSC per the 2010 AOC, which states: “If an onsite or offsite source of backfill soils that achieves all LUT values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill.” Therefore, any discussion of 2010 AOC implementation issues must include this concern. Please refer to Section 2.4, “Suitable Backfill Soil” of this CRD for further discussion of this topic.

623-34 DOE revised the text box to reflect the two separate statements as indicated in response to this comment. However, it should be noted that the 2010 AOC does state that cleanup to background levels does include in situ and other onsite treatment of soils that is able to achieve cleanup standards.

623-35 No burning of wastes in open pits occurred in Area IV. Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE's response to concerns about offsite impacts.

623-36 Boeing as the property owner has the right to determine what the future use of its land will be. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site and, consistent with EPA guidance, firmly establishes the basis for the use of risk assessment cleanup levels based on the determination of the future use of the land as open space.

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for those chemicals it claims are the greatest risk and another for those it asserts are of lesser risk, even though over the LUT values. All of this is indication of DOE's intent to break the AOC, which requires cleanup of all the soils, and very quickly – a six year time period was established in the AOC.

Moreover, DOE indicates that the key documents such as SRAIPs about actual cleanup are being hidden from the NEPA process. DOE says it plans to not even release the first plan until after DTSC issues the Final EIR. This is bait-and-switch, keeping from the public during the NEPA – and CEQA – process the key aspects that should be reviewed. Over and over again, DOE does this; trying to hide the core of its proposals from review. There is no excuse for this. The contamination has existed for seventy years at the site. The order by Judge Conti was a decade ago. The AOC was signed seven years ago. Hiding the key plans is unacceptable.

p. 1-16 to 1-19 DOE dramatically misrepresents the public comments received during the scoping process. The majority of those who presented testimony at the scoping hearings and the majority of those who submitted written comments strongly condemned any effort by DOE to break the commitments it had made—that the scope of the EIS would be limited to ways to carry out the AOC, not whether to do so. The majority over and over again said that no alternatives, with the exception of the required No Action alternative, should be included in the EIS—as EPA had promised in 2012. That is nowhere acknowledged. Instead, DOE—always with a heavy thumb on the scale of what is supposed to be a neutral, accurate process—tries to pretend this overwhelming insistence on the EIS scope being consistent with the AOC doesn't exist. It gives far more space to the small minority (often tied to DOE and other Responsible Parties in ways DOE does not disclose) that is helping provide cover for DOE to break its commitments. Disclose in the EIS how many commenters during the formal scoping process in 2014 at the hearings supported an AOC-compliant scope and how many written comments took the same position. Because DOE wants to break its commitment, it mischaracterizes the scoping comments received. This is not acceptable.²

Chapter 2

p. 1 asserts that the proposed action is to implement the AOC. This is false. None of the alternatives implements the AOC. The AOC bars consideration of "leave in place" alternatives. All four alternatives leave in place vast quantities of contaminated soil. The first alternative leaves in place on the order of half a million cubic yards. None of that meets the strict exceptions in the AOC.

The consideration of not cleaning up the groundwater but leaving the contaminants to supposedly naturally attenuate over long periods of time also violates the 2007 Consent Order. Once again, DOE is trying to get out of its cleanup obligations.

² DOE itself pushed the AOC supporters into one group at the workshop and spread those aligned with DOE's efforts to break the AOC into three others, in an effort to be able to claim three groups proposed alternatives to the AOC.

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- 623-37 The regulations stated in 40 CFR 1508.5 do not limit cooperating agencies to tribes where reservations would be impacted; rather cooperating agency status is required when Native American reservations are impacted. CEQ guidance encourages agencies to engage tribal agencies as a cooperating agency. Specifically the guidance says "As soon as practicable, but no later than the scoping process, Federal agency officials should identify State, tribal and local government agencies which have jurisdiction by law and or special expertise with respect to reasonable alternatives or significant environmental, social or economic impacts associated with a proposed action that requires the preparation of an environmental impact statement." Further CEQ states: "...cooperator status for appropriate non-Federal agencies should be routinely solicited)." In this case, the Santa Ynez Band of the Chumash Indians' interest in the site as a sacred site and traditional cultural property qualifies it as a cooperating agency.
- 623-38 DOE is not the owner of the land in Area IV and the NBZ; its purpose in preparing this Final EIS is to clean up the land so it can be returned to the land owner, Boeing. Boeing has formalized its previously stated intent by entering into a conservation easement and agreement that legally restricts future use of SSFL to open space, preventing any type of a development on Area IV, including a casino (Ventura County 2017a, 2017b). According to the provisions of the conservation easements these restrictions would apply to any future owner of the site. Accordingly, DOE is not aware of any conflict of interest with respect to the Santa Ynez Band tribe and the responsible parties
- 623-39 The original letter included in the reference Chumash 2014 from Marzulla Law to Sam Cohen was marked as attorney-client privileged information. It was proper that DOE respect that declaration. The nature of the letter was that the Santa Ynez Band of Chumash Indians requested that this EIS include a rigorous evaluation of reasonable alternatives.
- 623-40 The 2003 EA is part of the history of NEPA documentation related to the DOE cleanup of Area IV; as such it is considered to be related NEPA documentation.
- 623-41 The AOC allows for onsite treatment of soil (Section 2.6 of the 2010 AOC). Natural attenuation of low concentrations of TPH s in soil is an applicable onsite treatment method. DOE does not consider Monitored Natural Attenuation a 'leave in place' treatment methodology. There is nothing in the AOC that would prevent multiple SRAIPs and phasing soil cleanup, with targeting of radionuclides and high concentrations of chemicals first making the most sense.

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p. 2-1 lists the EA and FONSI as official documents affecting the EIS; no, they were struck down by the court.

623-40 cont'd

2-2 The discussion of why DOE is trying to breach the AOC and its 2012 commitments about the EIS scope is disingenuous. No genuine scientific issues have arisen. And the public comments received during the formal scoping process were overwhelmingly in favor of living up to those commitments. All that has changed is that DOE now wants to break the promises it made.

623-44

The statement made here, and throughout the EIS, that its Alternatives 2 and 3 are risk-based are false. DOE is using risk based screening levels hundreds, thousands, and tens of thousands of times higher than the true risk based screening levels even for residential use, the scenario it claims to be using. Additionally, the assertion that risk-based levels for radionuclides are expressed as radiation dose is false. EPA's CERCLA program has long insisted that radionuclide concentrations be set based on risk, not dose. (See, e.g., EPA Q&A on Radiation Risk Assessment in CERCLA.) And indeed, the risks associated with the concentrations of radionuclides DOE is proposing as cleanup standards are staggering – risks in the 10¹ and 10² levels (as much as several hundred thousands times higher risk than the one-in-a-million risk goal for DTSC and EPA and which DOE claims falsely in the EIS to be meeting). See the risk estimates from DOE's Preliminary Remediation Goal calculator for radionuclides, attached as an exhibit.

623-9 cont'd

The entire key to the EIS is its efforts to bury the AOC, hide it, make it go away. That is true in all this discussion.

p. 2-4 contains the key revelation, that all alternatives considered in the EIS would breach the AOC. That is true. The first one, although entitled cleaning up to AOC LUT values, exempts nearly 40% of the soil from that requirement, in violation of the AOC. All others violate it even more. None, with the exception of the No Action Alternative, is supposed to.

623-3 cont'd

p. 2-5 misrepresents the workshop. As indicated above, as part of DOE's efforts to give itself cover for breaking the AOC, it itself assigned people to the four groups, so as to claim there were four approaches, only one of which was meet the legal obligations of the AOC. And DOE does not disclose its ties, and that of its longstanding contractor Boeing, to some of those people. Furthermore, the other three groups were not formally recommending breach of the AOC; they recommended carrying it out in a way that emphasized certain values.

623-45

What is key about the misrepresentation of the workshop is the failure of DOE to quote or even acknowledge its own fact sheet distributed at the workshop, which clearly stated that the scope of the EIS would be limited to alternative ways to carry out the AOC. All of the suggestions given were in that context, as set by DOE itself. It should quote the Fact Sheet extensively in the EIS; it doesn't do so because it doesn't want to acknowledge it is breaking those commitments.

It is false to claim that all the groups at the workshop agreed on cleaning up to open space requirements. There was strenuous insistence on cleaning it up so that it was safe for all uses allowed under Ventura County zoning and general plan designations. And the great majority of

623-42 DTSC is currently preparing a program environmental impact report (Program EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the 2010 AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. These plans may provide more detail, as is appropriate for an implementation plan, but the planned cleanup would be encompassed in the alternatives presented and evaluated in this Final EIS.

As noted above DOE and DTSC need to conform the decisions in the DOE EIS ROD(s) and the TRSC's Program EIR Notice of Determination. This step would finalize the decisions regarding soil and groundwater cleanup. Since the SRAIP will detail the technical and operational plans for soil remediation within Area IV and the NBZ, the final versions cannot be developed until after this step is completed. DOE notes that DTSC states in the Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California, Appendix A, "Program Management Plan," that the "Draft SRAIPs will be made available for public comment."

623-43 DOE does not believe it misrepresented or mischaracterized the scoping comments received. DOE refers the commenter to the CEQ statement that commenting is not a form of voting (CEQ 2007). Similarly, the number of comments received stating a preference for including or excluding material from this Final EIS does not dictate the scope of DOE's analysis. Rather, as indicated above, under NEPA DOE has an obligation to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, DTSC at DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ. An extensive discussion of legal requirements to analyze a full range of alternatives is included in Chapter 2, Section 2.3.3, of this EIS.

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commenters during the formal scoping insisted on living up to the commitment to clean it up to background. DOE is playing very loose with the process, mischaracterizing the informal workshops, and ignoring the formal scoping process, where insistence on living up to the AOC promises far outweighed any other view.

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The discussion of "green cleanup" is very misleading. What DOE is proposing is the exact opposite of green cleanup. It proposes to leave the contamination not cleaned up – the antithesis of green.

623-46

2-10 The excuses why DOE breached the AOC requirement for cleanup by 2017 are unpersuasive. Indeed, the promised cleanup hasn't even begun. DOE just dragged its feet, as a way of breaking its obligations.

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2-11 DOE simply dismisses out of hand looking at reasonable transportation alternatives, like using and upgrading the roads out of Area IV headed north, or a covered conveyor, or the nearby train routes. Once again, DOE creates a straw man; since it sat on its hands so no cleanup began by 2017, it refuses to come up with reasonable transportation alternatives because that might take a bit of time. It should have begun years ago, and should have included the transportation alternatives in this EIS which was years in the making, and can still carry out most of the alternatives in a very short time, saving money and reducing impacts.

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2-13 in a parenthetical aside, DOE merely says the garden component of the suburban residential scenario "was not evaluated." No reason is given. Elsewhere, completely arbitrary reasons are given. If one is to assume a residential exposure, the garden is part of it. We are trying to protect people not just on site, but also offsite; they have gardens. DOE is completely capricious about saying they will clean up to residential standards but then excluding from those standards the required garden component. The real reason that DOE has done this in the EIS is that most of the time it says it is cleaning up to suburban residential standards, when in fact it isn't. There is one footnote and this parenthetical comment, but the rest of the time the omission is not disclosed. Leaving out the garden results in cleanup standards orders of magnitude higher than true suburban residential standards, and thus very little cleanup of the contamination.

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2-17 to 18 Leaving contaminants in place is barred by the AOC. Natural attenuation is thus barred. The time estimates given in the EIS are on the one hand very long – 70 years – and on the other the true time periods are far longer, according to the very studies cited. Indeed, those studies indicate no evidence of any attenuation under actual conditions at the site.

623-47

2-18 The claimed biological exemption violates the actual provision of the AOC, which is limited to a finding of illegality by US Fish and Wildlife Service in a Section 7 Biological Opinion, with no reasonable alternatives or mitigations. There is no such Biological Opinion.

623-48

The exemption the EIS characterizes as for cultural features is also far more narrow – it is limited to Native American artifacts that are officially recognized. The EIS admits there are none. Furthermore, the exception requires DTSC approval, no alternatives available (like working around the artifact or removing it and later replacing it), and still requires cleanup as close to background as possible.

623-44 Please refer to the response to comment 623-3.

623-45 Chapter 2, Section 2.2.2 of this EIS, is intended to provide background on a number of factors that influenced the development of alternatives presented in this EIS. DOE respectfully disagrees with the characterization of its intentions related to the workshops and that the workshops are misrepresented. DOE properly has considered changing conditions and input from stakeholders in developing the alternatives evaluated in this EIS. As discussed in Chapter 2, Section 2.3.3.1 of this EIS, there are real technical issues with implementing the technical elements of the 2010 AOC such as, complying with the LUT values per the requirements in the AOC. There has also been a lot of new site contamination characterization information that has become available since the 2010 AOC was signed (see the response to comment 623-2). While there were many stakeholders that advocated for strict implementation of the 2010 AOC, during the workshop and the scoping period for this EIS, there were also stakeholders who were in favor of cleaning up the site, but requested that decisions be based on risk to future users as opposed to cleanup to background. DOE considered all of these factors in developing the alternatives included in this EIS.

623-46 "Green Cleanup" has a specific meaning for remediation. The green cleanup process implements green and sustainable remediation and innovative technology practices throughout the remediation process. Green cleanup practices minimize energy use (maximizing renewable energy); minimize air pollutants and greenhouse gas emissions; minimize water use and impacts on water resources; reduce, reuse, and recycle materials and waste; and protect land and ecosystems. DOE is committed to using green cleanup processes to the extent feasible in all aspects of remediation, for additional information refer to Chapter 2, Section 2.2.2, and Chapter 7, Resource Commitments, of this EIS.

None of DOE's action alternatives for soil remediation proposes leaving contamination not cleaned up. This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. It also analyzes alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of Area IV and the NBZ.

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And the 5% exemption for unanticipated problems clearly isn't applicable—DOE is anticipating it will claim the exception, thus violating it. The matters it anticipates do not apply, like desiring not to clean up below 5 feet.

Figure 2-2 shows that many of the areas DOE wishes to exempt from cleanup are right where the contamination is, such as the burn pit, the SRE area, etc. This is demonstrated by the fact that the proposed areas to leave in place represent up to 40% of the overall contamination. This violates the AOC and is unacceptable.

§2.2.3 is a direct attack on the AOC that DOE signed, is without scientific basis, and contains numerous misrepresentations. It claims that "technical aspects of implementing the 'cleanup to background' approach described in the 2010 AOC...*compelled* DOE to look at other soil cleanup alternatives. . ." (emphasis added). This, of course, is untrue. Virtually all of the issues DOE now raises are not new; it knew of all them when it signed the AOC. Moreover, it was DOE that proposed the cleanup to background. It now is merely coming up with empty excuses for breaking the promises it made and the agreement it itself had proposed.

DOE claims that a cleanup to background is lower than what is typically used as a standard for soil cleanup. However, cleanups to background are in fact frequent. DTSC (see attached Brausch declaration) gave numerous examples in California where this is done:

- 9. DTSC has cleaned up contaminants at other sites to background levels in situations where, as with the Santa Susana Field Laboratory, the calculated risk levels are below the local background concentrations for contaminants. Examples of sites where DTSC has used this same approach include, but are not limited to, Midway Village in Daly City, California; Eskimo Radiator in Los Angeles, California; Western Lead Products Corporation in City of Commerce, California; and Ace Trailer Park in Downey, California.

And as DTSC said in its 2010 Response to Comments on the Agreement in Principle, its standard practice when it uses a risk-based approach is to clean up to local land use designations, and for SSFL, that is agricultural, which DTSC said equals a cleanup to background. It made that statement based on analysis of risk-based cleanup levels and how they compare to local background.

DOE's EIS supports these false statements with more misrepresentations. It states (p. 2-24) that the risk-based standard from the SRAM for mercury is 16.8 parts per million, while the AOC LUT value is 0.13 parts per million. But that is false. The SRAM-based suburban residential risk-based level (which includes a garden) for mercury is in fact 0.0504. (see the 2nd highlighted column on pdf page 1071 of the SRAM). The true risk-based value (Risk Based Screening Level, or RBSL) is 333 times lower than what DOE claims.

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623-47 The AOC allows for onsite treatment, which natural attenuation will accomplish. Natural attenuation is only being considered for "low concentrations" of TPH chemicals and would be used only after DTSC approves its use. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans.) See Chapter 2, Section 2.3.2 of this Final EIS for additional information. The referenced studies also addressed much higher concentrations of chemicals.

623-48 Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. The Office of Historic Preservation supports DOE's preference to avoid disturbance at archaeological sites or to risk disturbance to unknown sites if there is no direct threat. Through formal and informal consultation with the State Historic Preservation Officer, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes, DOE has also identified areas in which it proposes to apply the exemption process for protection of cultural resources. This process is described in this Final EIS Chapter 2, Section 2.3. The application of cultural resource exemptions requires the approval of the DTSC.

Specifically, the proposed exemption areas on the necessarily small-scale maps included in the Draft EIS do include areas such as the Sodium Reactor Experiment that have levels of soil constituents that would be remediated. Their inclusion in the mapped areas is because of the immediate proximity to habitat that supports endangered species. The delineation of exemption areas would be refined as planning and consultation proceed and in any event, thorough evaluation of contamination and focused removal actions would be conducted to remove levels that pose a risk to human health or the environment. The 5 percent exemption noted in the comment is for unforeseen circumstances and would be invoked, subject to DTSC approval, as remediation planning and implementation proceed.

At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS, CDFW, and DTSC for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. However, both USFWS and CDFW provided letters stating concurrence with the exemption process. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on the exemptions areas in Area IV and the NBZ.

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Similarly, the EIS claims that the risk-based standard from the SRAM for silver is 230 ppm, but the LUT is 0.2. However, in fact, the SRAM-based RBSL for suburban residential exposures is 1.81, 127 times lower than DOE claims.

The EIS claims the SRAM-based residential RBSL for Aroclor 1254 is 232 parts per billion, compared to the LUT of 17 ppb. But in fact, the SRAM-based residential RBSL is 0.486 (one needs to convert from mg/kg to ppb). The risk from the LUT value is in fact 35 times higher than the risk-based concentration. What DOE claims is the risk based value from the SRAM is in fact 477 times higher (less protective) than the true value.

What DOE does – and does not disclose – is improperly use one column from the DTSC-approved SRAM for residential that is hundreds of times more lax than the second column, which is supposed to be used. One is supposed to consider both aspects of the suburban residential scenario, getting some soil on your hand, for example, as well as getting some of the contamination in you by eating an apple or tomato that you grew in the backyard. The latter is generally the dominant risk component, and DOE just ignored it. It claimed to use the DTSC-approved SRAM-based suburban residential risk based screening levels, but didn't. It used levels hundreds or thousands of times more lax.

The DTSC-approved SRAM, beginning at pdf p. 1071, shows two components of the suburban residential exposure scenario. The first salmon-highlighted column is for the exposures such as getting some of the soil on one's skin; the second highlighted column is for exposures from the residential backyard garden. DOE misleadingly states that it is using the SRAM-based suburban residential RBSLs, but in fact those SRAM-based suburban residential RBSLs are dominated by the second highlighted column, which is directly labeled SRAM-based suburban residential RBSL with garden.

DOE misrepresents the situation with radionuclides even further. It refers to the cleanup levels Boeing proposed in 1999, which were extremely high and non-protective. The cleanup level for Cs-137 Boeing wanted back then was 9.3 picocuries per gram (pCi/g). But the current EPA Preliminary Remediation Goal (PRG) for Cs-137 for a suburban residential scenario using EPA's default assumptions is actually 0.0302 pCi/g – 300 times lower. The LUT value of 0.225 pCi/g thus is above, rather than below DOE claims that a suburban residential land use scenario consistent with the SRAM corresponds to 10.3 pCi/g. But the EPA suburban residential PRG is, as shown above, hundreds of times lower than that. DOE just misrepresents what is a residential cleanup standard, and is proposing to leave behind hundreds of times higher concentrations than appropriate, either in terms of compliance with the AOC or from a true risk standpoint. And note that agricultural scenario, which is what should be used for a risk-based cleanup because that is what the land is zoned for and there are nearby agricultural uses, would produce even lower acceptable cleanup concentrations.

The claim made by DOE that the LUT values are unnecessary from a risk standpoint is thus false. It is based on misrepresenting the risk screening levels. The LUT values are quite consistent with risk-based levels. And the levels DOE proposes would produce risks far higher than acceptable or what it claims.

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623-49 The mercury RBSL of 16.8 ppm for the Suburban Resident without garden is correct. The background concentration for mercury is 0.13 parts per million. The commenter's discussion regarding the Suburban Resident RBSL with garden is moot as one cannot clean up to below background.

623-50 DOE is applying a risk assessment approach that produces results consistent with the CERCLA target risk range to identify where radionuclides are to be cleaned up. DOE is not using a specific soil standard so the discussion on prior cleanup levels is not relevant.

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There is thus no risk basis for breaking the AOC. Furthermore, nothing that DOE purports about risk is new – it knew all that when it agreed to clean up to background. Indeed, it was DOE that proposed the cleanup to background.

DOE also attacks the AOC it signed because it is based on a “not to exceed” basis, what for some reason it now calls in the EIS a “point-by-point” process. “Not to exceed” means that no sample shall exceed background, i.e., be contaminated; if it is, DOE is to clean it up. The AOC expressly requires such a cleanup and bars averaging, where one might refuse to clean up contamination in one place because levels a few acres away are lower. If your child is playing in your backyard or in a picnic area somewhere, you don’t want him or her to be exposed to elevated contamination just because levels a half mile away are not as bad. DOE signed the agreement, well aware it was promising to not average. Now it is trying to renege on that commitment.

DOE entered into a Joint Policy with EPA in 1995 pledging to follow EPA Superfund guidance in cleanup of all DOE sites, whether or not on the NPL. EPA guidance is that one is not to average, and instead is to use a “not to exceed” approach, whenever exposure can’t be guaranteed to be random. It expressly identifies residential exposures as non-random, for which averaging should not be employed. DOE is trying to get out of its Joint Policy as well as the AOC. Someone should not be exposed to elevated levels of radioactivity or other contaminants at one location because someone somewhere else is exposed to lower levels.

DOE admits on p 2-25 that cleaning up on a not-to exceed-basis does occur at numerous sites. It then tries to claim that because SSFL is so badly contaminated, with so many toxic chemicals and radionuclides, a lesser cleanup should be allowed. This is illogical. If the situation is worse, and there are many more dangerous materials, one wants more protection, not less.

DOE proposes instead what it calls risk-assessment-based cleanup. DOE does not define what it means by this term—and should far more precisely in the EIS—but it appears to be including three separate mechanisms for dramatically weakening the cleanup from what was promised. First of all, it is using the wrong risk based screening level (RBSL). As shown above, it should use agricultural RBSLs, because that is what the site is zoned for, the General Plan allows, and there are agricultural activities close by. Additionally, it is using purported suburban residential RBSLs that are orders of magnitude less protective than the true suburban residential RBSLs, by leaving out the required garden exposure. Secondly, it appears to breach the requirement for a “not to exceed” cleanup, instead averaging contaminants over wide areas, so that soil elevated over the already very weak RBSLs they propose would still not get cleaned up. Third, because there are so many contaminants with which they have polluted SSFL, even if a grossly weak RBSL were exceeded, even with averaging, they don’t want to clean it up, but rather do a supposed risk-assessment procedure that would allow them to avoid cleanup. This procedure is not defined – and must be – but the little hints in the EIS suggest that it involves adding all contaminants together and allowing risks as much as three hundred times higher than the risk they claim they would be meeting for an individual contaminant.

When there are multiple contaminants and risk-based levels are established, the required procedure is a “sum of the fractions” approach. In other words, if contaminant A has a risk-

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- 623-51 The comment contains many inaccuracies. DOE’s criticism of the AOC was not based on “not to exceed” language, it was based on DTSC selecting LUT values so low that the soil results could not be distinguished from background. Risk assessments are based on land use considerations, with some based on residential lot size. Risk assessments are not based on larger areas, as the commenter implies. EPA does area average its residential risk assessments. EPA guidance: Supplemental Guidance to Risk Assessment Guidance for Superfund: Calculating the Concentration Term. Publication 9285.7-081 [EPA 1992]), states the basis for risk determination assumes a random exposure over an exposure area. The exposure area is an assumed location where exposure to the chemical in soil may occur. Risk from exposure to a chemical is then related to the arithmetic mean concentration of that chemical averaged over the entire exposure area, regardless of the current or future land use type. Because the true arithmetic mean concentration cannot be calculated with 100 percent certainty from a limited number of measurements, the EPA recommends that the upper 95th percentile confidence limit of the arithmetic mean at each exposure point be used when calculating exposure and risk at that location (EPA Office of Solid Waste and Emergency Response.) This is also consistent with DTSC Human and Ecological Risk Office guidance that states: “In cases where there is adequate characterization, the 95 percent upper confidence limit (UCL) of the arithmetic mean may be used for the exposure point concentration.” Finally, nowhere in the Draft EIS does DOE claim that “SSFL is so badly contaminated” or use such an argument for a reduced cleanup. The extensive soil sampling performed by EPA and DOE and the review of those data by EPA and DTSC show that radioactive contamination is restricted to about 12 locations (and the majority of those were located within 5 areas of Area IV), and chemical contamination is associated with former operational areas.
- 623-52 Chapter 4, Section 4.9.1, of the Final EIS describe the basis for the risk assessment process used by DOE. The risk assessments are based on EPA and DTSC guidance, and the SRAM. Please see the response to comments 623-99 and 623-103. Contaminant impacts were evaluated in Chapter 4, Section 4.9, of this EIS, as the sum of multiple individual contaminants. The RBSLs were only used for scaling factors to determine the individual risks and then risks were summed. Cleanup under the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative would be performed using “the sum of fractions” approach to achieve the target risk/dose based limits proposed. The approach used in this EIS is presented in Appendices G and K.

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based cleanup level of X, and contaminant B has a risk-based cleanup level of Y, and both are present, one isn't allowed to avoid cleanup if contaminants A and B are each at, say, 95% of their limits. Instead, one takes the fraction of the limit for each, adds them together, and cleans up if collectively they exceed a ratio of 1.

Because DOE has contaminated SSFL so badly, with so many pollutants, it appears to be suggesting avoiding cleanup obligations by not just breaking the AOC, not just using the wrong RBSL, not just averaging, but by allowing contaminants to nonetheless remain not cleaned up, by some undefined risk assessment process. It will use RBSLs, it proposes, not to actual do cleanup, but to "make cleanup decisions," and appears to contemplate allowing collective average risks to go as high as several hundred times the one in a million risk level it had promised and is the standard risk goal. When one adds in the problem of using the wrong RBSL and of averaging, this approach could leave contaminant levels thousands and tens of thousands and even hundreds of thousands of times higher than if the normal risk goals were used and used appropriately.

This needs to be candidly disclosed, rather than hidden, in the EIS. Is DOE proposing that remaining risks would exceed the one in a million risk goal? Is it, at least for Alternative 3, not even using the RBSLs as cleanup levels but, in addition to exceeding them by averaging, also exceeding them by a risk assessment process that allows risks orders of magnitude higher than 10^{-6} ? Does it propose to not follow the sum of the fractions rule for Alternatives 2 and/or 3?

DOE argues on p 2-25 that it should be allowed to break the AOC because there are too many contaminants with which it has polluted SSFL. This is illogical. The fact that it contaminates the site with so many chemicals argues for stricter standards, not weaker ones.

DOE cherry picks two examples of other cleanups that it asserts have weaker cleanup standards than DOE agreed to at SSFL. But even if true, there are many other cleanups that are stronger, and in any case, DOE agreed to cleanup to background at SSFL, and the fact that some other sites are controversially using weaker standards was known when DOE signed the AOC. It provides no basis for breaking it.

DOE asserts that the "AOC LUT values do not account for the natural occurrence of many constituents in the soil, meaning that they could lead to decisions to remove soil that has not been contaminated by Area IV soil." This is false. The LUT values are based on background—the natural occurrence of the constituents. Furthermore, the statistical test used to establish background, USL, is the least protective of human health by far of statistical tests and errs exceedingly heavily on not removing soil that has not been contaminated. Its bias is very strongly to avoiding cleaning something up that is not contaminated, when arguably the bias should be to avoid not cleaning up something that is contaminated.

The imprecise language employed in the EIS, saying that point-by-point exceedances of its proposed revised LUT values, in Alternative 2, will trigger "cleanup decisions," rather than trigger cleanup, is troubling. In Alternative 3, DOE seems to imply that even when averaged over wide areas, averaged exceedances of its proposed revised LUT values will not necessarily trigger cleanup, but only "cleanup decisions." And in the purported risk assessment and cost-

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Please see Chapter 4, Section 4.9, for a summary of the risks associated with each of the action alternatives. In view of the rate of cancer in the general population (nearly 1 out to 2 in a lifetime), EPA CERCLA guidance has established that risks of getting cancer less than 1 in 1,000,000 are insignificant and that risks in the range of 1 in 10,000 to 1 in 1,000,000 may be acceptable when all impacts of remediation options are evaluated. Therefore, risks in that range are typically evaluated for acceptability during evaluation of alternatives and selection of a remedy for remediation.

623-53 Background soil concentrations are not an absolute value but reflect a range of possible values. This means there is a potential for naturally occurring concentrations of a constituents to be above a value that does not properly consider the possible range of values. Selection of the value needs to consider the natural variability. DOE's assertion is based on the fact that 42 percent of the chemicals analyzed by DTSC for the identified background sites exceeded their AOC LUT value in at least one sample and at about 25 percent of the background points at which samples were taken at least one chemical exceeded its AOC LUT value. This means that the LUT values did not adequately consider the natural variability of constituents in soil.

623-54 Please see the response to comment 623-51. A cleanup decision would lead to cleanup. The language reflects the need to evaluate to determine if the cleanup level has been achieved.

623-55 As discussed in Chapter 4, Section 4.9 of the Draft EIS, The risk values are compared to an EPA defined acceptable risk range of 1 in 1,000,000 to 1 in 10,000. Any risks lower than this range are by default acceptable. Any risks higher than this range are by default usually unacceptable. Risks within the range are subject to a cost-benefit evaluation. So the upper threshold for potentially acceptable risk is 1 in 10,000. In response to comments, DOE has added a quantitative evaluation of onsite impacts for all soil remediation alternatives. The results of the modeling are included in Chapter 4, Section 4.9 of this Final EIS.

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benefit analysis in the appendices, it appears DOE is proposing risks far in excess of the 10⁻⁶ level the EIS repeatedly asserts as the cleanup level for its Alternatives 2 and 3.

We oppose DOE breaching its commitments to cleanup to background and its proposals to instead use what it claims are suburban residential RBSLs. Furthermore, the claimed proposed revised LUT values, asserted to be based on residential RBSLs, are not the actual suburban residential RBSLs, but orders of magnitude higher. We oppose this as well.

We oppose DOE using its revised LUT values as merely levels that trigger “cleanup decisions” rather than cleanup itself.

We oppose DOE employing some undefined “risk assessment process” for cleanup, rather than actually cleaning up to cleanup levels.

We oppose allowing multiple contaminants to allow greater risk above background than the limits for individual contaminants allow, i.e., failing to employ the sum of the fractions rule.

We oppose averaging, which would allow concentrations of pollutants in one location far in excess of cleanup levels, by averaging with other locations elsewhere that are cleaner. Exposures are not random, and people thus could be exposed at excessive levels. EPA guidance is to use the “not-to-exceed” approach of cleaning up everything over the cleanup level rather than averaging³ elevated areas with lower areas for residential cleanup standards, as DOE is using, or any other where the exposure cannot be guaranteed to be random. Averaging violates the AOC; averaging is at variance with EPA guidance⁴, which DOE is bound to follow pursuant to the 1995 DOE-EPA Joint Policy. And averaging violates both fundamental scientific and public health principles. Cleanup aims to protect the person who might reasonably be expected to get the maximum exposure. Allowing some people to get excessive exposures because other people would get lower exposures is impermissible. DOE must live up to its commitments in the AOC to not average.

At the end of the day, DOE must live up to the commitments made in the AOC. All of its alternatives violate the AOC, violate basic principles of environmental remediation, and would pose great and unacceptable risks to public health and the environment.

DOE then goes on to argue that there is a high level of uncertainty in cleanup decisions under the AOC. Again, this is scientifically false, and does not represent anything new that DOE didn't know when it signed the AOC.

³ see Radiation Risk Assessment at CERCLA Sites: Q&A, OSWER 9285.6-20, June 13, 2014

⁴ DOE in the EIS conveniently ignores the recent EPA guidance, the Q&A mentioned above, and instead references a 25-year-old guidance document that nowhere says that one should average, but merely shows how to do it if one is going to average. As indicated in the Q&A, averaging may be appropriate in limited circumstances, but not when one is presuming residential exposures or others that can't be guaranteed to be random.

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623-56 DOE acknowledges the authority of the DTSC to set the LUT values per the 2010 AOC. The statement that there was nothing new that DOE “didn't know when it signed the AOC” what the soil cleanup levels would be, is inaccurate. The AOC was signed in December 2010. DTSC published the LUT values in June 2013. DOE could not assess the impact of the values on soil cleanup decision until after June 2013.

The LUT values were adjusted based on EPA's recommended uncertainty process. As described in Chapter 2, Section 2.3.3.1 of the EIS, EPA provided guidance and recommendations on how the AOC LUT values for radionuclides should be developed (HGL 2012c). EPA states that, “BTVs [Background Threshold Values] alone are neither appropriate nor recommended for use as the LUT values.” EPA also stated that their field action levels (FALs), which they renamed “radiological trigger levels” (RTLs) after adding uncertainty factors to the FALs, should not be used for radionuclide LUT values. EPA stated that the RTLs were developed for EPA's radiological investigation of Area IV and, “UEPA does not [EPA emphasis] recommend the use of those [RTLs] for future phases of the project,” (i.e., cleanup). EPA recommends consideration of uncertainty in the decision-making process. EPA states, “For any given sample, a laboratory result that is equal to the BTV represents a range of possible true values for that sample; some of which are less than the BTV and some of which are greater than the BTV. Whether that result represents a true sample value that actually exceeds the BTV is purely a matter of chance; a decision that the BTV has been exceeded would be incorrect 50 percent of the time,” (meaning a 50 percent false positive rate or that one-half the time, DOE could be remediating clean soil). EPA further states, “[e]stablishing a decision criterion, without considering the impact [of uncertainty], would

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This section misstates the primary statistical issue of uncertainty. DOE argues that there needs to be certainty that every soil sample to be cleaned up is indeed contaminated. However, there are two aspects to uncertainty – (1) the probability that one might clean up some dirt whose measurements show it to be above background when in fact it is not, and (2) the probability that some dirt that measurements report it to be at or below background when it is in fact contaminated. In other words, what is an acceptable level of cleaning up a bit of dirt that doesn't need cleaning up versus what is acceptable to erroneously not clean up when it needed to be. These are typical Type I and Type II statistical error issues. DOE is only concerned with the first type of uncertainty and completely ignores the second. It is the risk of not cleaning up something that needs to be cleaned up that should dominate.

The chance of a sample being erroneously reported as above background when it is in fact not has been reduced to a vanishingly small probability by the statistical test EPA and DTSC used to establish background. Called the Upper Simultaneous Limit (USL), it is a very rarely employed technique that is the least conservative in terms of protecting public health and avoiding the failure to clean up something that is indeed contaminated, and the most conservative in terms of avoiding cleaning up something that might in fact not be contaminated. In other words, it is very heavily weighted to protecting DOE's bottom line as opposed to protecting the public that could be harmed by DOE's contamination. See EIS reference URS 2012, which expressly states that the USL was chosen as the technique that would reduce to an absolute minimum the problem of false positives (avoiding cleaning up something that didn't need to be); this of course increased the problem of false negatives, the risk of not cleaning up something that needs to be.

The EIS does not mention or acknowledge this. Instead, it creates the spurious argument that with so many contaminants, there is a chance that occasionally a contaminant will be reported above background when it is not. But because the background values were so heavily inflated in the first place, the chances of this occurring are very small. And the AOC is based on a recognition that cleaning some small amounts of soil that may not have needed to be cleaned up is an acceptable trade-off given the significant amounts of soil that won't be cleaned up but should have been.

It is important to recognize that the soil sampling is just that – sampling – and that measurements of much of the hundreds of acres involved have not been made and won't be. Thus large amounts of soil that may be contaminated will not be cleaned up because no measurements were made in the first place.

The arguments about detection levels also are without merit. The LUT values were set based on background and detection limits. To say they are set at the "lower limits" of detection limits for some constituents is misleading – they were set within the detection limits. And the example given for strontium-90 is also misleading; the detection limits EPA employed for the background measurements for many of the samples were much lower than the LUT values.

The LUT values are based on background and detection limits. They are based on what can readily be detected. They are not set at levels that can't be detected.

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result in a potential situation in which the release of uncontaminated background-level material would not be assured, but would instead be randomly determined, similar to a coin toss." EPA goes on to caution DTSC's selection of AOC LUT values: "While DTSC may select LUT values that are equal to cleanup levels, it is EPA's understanding that the extraordinarily high decision error rate for laboratory results at or near those cleanup levels [that is, background] is believed to be unacceptable." EPA states that it "recommends an adjustment to the BTVs and minimum detectable concentrations to include appropriate consideration [for uncertainty] to ensure an acceptably low decision error rate of approximately 5 percent" (HGL 2012c). The FALs used by EPA in presenting potential radionuclide contamination did not include an uncertainty factor and, thus per EPA, should not be used to determine the presence of radionuclide contamination.

The issue of decision rate error for radionuclides also applies to chemicals. The 2010 AOC (DTSC 2010) (paragraph 1.8.3.1) specifies that the detection limits for the chemical AOC LUT values should be based on the "lowest concentrations at which an analyte can be confidently detected in a sample and its concentration can be reported with a reasonable degree of accuracy and precision." During the development of the chemical AOC LUT values, DTSC chemists were critical of the process. In a memorandum to DTSC management, the chemists stated, "[t]he Environmental Chemistry Laboratory does not recommend the process outlined in the current Draft Technical Memorandum to serve as the foundation for site characterizations and for the development of the [method reporting limit] lookup table values" (DTSC 2012a).

See response 623-59, for a discussion of the impacts of leaving soil where samples had values slightly above the AOC LUT values.

623-57 DOE disagrees with the commenter. Over 10,000 soil samples for chemicals and 3,000 samples for radionuclides have been collected. Area IV and the NBZ comprise about 472 acres. That is about 27 samples per acre. Area IV is adequately characterized and the locations with contamination well defined.

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Furthermore, it is not up to DOE to determine the LUT values or detection limits; DTSC has that authority under the AOC. It has set the LUT values; DOE had a right to comment when those were proposed, years ago; it is untimely to try to raise the matter now. But in any case, it is not within DOE's purview; it is DTSC's.

The assertion that DOE might clean up some soil where contamination doesn't exist is not supported by the DOE statement that the LUT values are based on the lower limits of detection limits for some constituents. And again, the key issue isn't whether some soil may occasionally get cleaned up when it may not have been above background; that is the small price presumed to be paid for dealing with the Type II error, that much soil that is contaminated wouldn't get cleaned up.

p. 2-25 – 26 discussion of EPA's recommendation is inaccurate. The AOC says that the values EPA determined for background and for detection limits during its background study are to be the LUT values. EPA recommendations for something different do not override the AOC. But in any case, DTSC has taken the EPA recommendations and created LUT values accordingly, using not the detection limit from the background study but more lax detection limits.

The assertion in the EIS that DTSC has set a 5% acceptable error rate misstates what was done. Because the background value was already greatly inflated by the use of the USL, a 95% confidence in a measured value does not mean that 5% of the time one would clean up something that doesn't need to be. And once again DOE completely ignores the false negative problem, that a significant percent of the time a measurement would indicate the sample was below background when it was in fact contaminated.

Furthermore, DTSC set not an overall 5% acceptable error rate, as suggested by DOE in the EIS, but set a "decision error rate of 5% for the measurement uncertainty at the BTV or MRL." EIS reference DTSC 2012, emphasis added. And that is for measurement of each contaminant. DOE tries to shoehorn that into a requirement of an overall cumulative error rate. DTSC set the LUT values based on detection limits that could have a 5% error rate.

The claim of compounding errors was raised during the EPA radiation survey by someone allied with efforts to break the AOC. EPA strongly refuted the argument and in fact, when the sampling was completed, concluded that the problem had not occurred, just as they had said it wouldn't. Despite measuring for more than a hundred radionuclides, the findings of contamination were reliable, as expected, limited to and focused on the key radionuclides of concern. This DOE argument now is a straw man.

Appendix J states:

In order to make cleanup decisions that involve remediation of only contaminated soils that exceed cleanup standards (e.g., no unnecessary remediation of clean soil), the remediation manager would require having high confidence in the conclusion that contaminants are present at concentrations that exceed the cleanup standard. In making cleanup decisions, two types of decision errors are possible:

A false negative decision error would occur if a remediation manager decides site

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623-58 DOE disagrees with the commenter. The text in Chapter 2, Section 2.3.3, of the Draft EIS, accurately presents quotations made by EPA and its recommendations to DTSC on deriving the radionuclide LUT values.

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623-59 DOE disagrees with the commenter. DTSC did not "inflate" the background concentration; they used a concentration within the upper range of values as determined in accordance with statistical procedures also used by EPA. Background is a range of values, not an absolute value. Any concentration within that range is a true background value. Normally, decision criteria are established at a point where there is a 95 percent chance of the correct decision being made. The recommendation made by EPA on decision error was to consider uncertainty factors in the selection of the background values that would minimize the potential for removing non-contaminated soils.

Regarding the commenters concern that DOE is ignoring the false negative problem, DOE recognizes that false negative samples could occur. However, any sample subject to a false negative would indicate a sample with a contaminant concentration near background levels, i.e., near the AOC LUT value. As discussed in several locations within these comment responses and in the Final EIS, a value exceeding a LUT value is not necessarily indicative of contamination and that sample value would be below any of the risk-based standards used in this EIS to determine potential impacts to human health or the environment.

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exposures are not of health concern, when in fact they are of concern.

A false positive decision error would occur if a remediation manager decides site
exposures are above a level of concern, when in fact they are not.

*Remediation managers are most concerned about guarding against the occurrence of
false negative decision errors, since an error of this type may leave human and
ecological receptors exposed to unacceptable levels of contamination. However,
remediation managers are also concerned with the probability of making false positive
decision errors. Although this type of decision error does not result in unacceptable
exposures, it may result in unnecessary expenditure of resources (i.e., remediation of
soils that are not actually contaminated). For the purposes of the Area IV/NBZ, the goal
is to limit the false positive decision error rate to 5% or
less (DTSC 2013). (lined and italicized emphases added)*

Note the extraordinary statements here. While acknowledging that there are two types of error—false negatives and false positives—and that remediation managers should be most concerned about the former, where something that needs to get cleaned up doesn't in fact get cleaned up, DOE here proposes only to be concerned about false positives, cleaning up something that arguably didn't have to, i.e., "unnecessary expenditure of resources." This entire analysis is based on saving DOE money, at the expense of increasing the percentage of time people are exposed to contaminants that should have been cleaned up but weren't.

As indicated above, the claimed DTSC reference is incorrect. All DTSC said is that it was setting detection limits high enough that measurement uncertainty would not exceed 5% for each constituent. It did not say it was limiting cumulative false positive measurements to 5%. But more importantly, it chose to use the USL statistical approach to background, which inflated the results compared to any other possible statistical method considered, so as to reduce false positives to the maximum extent possible.

The appendix analysis erroneously claims there is no false negative positive. But background is not a single number; it is a statistical estimate of the upper limit of a range of background values. Comparing a range of field measurements with an upper limit of background is apples and oranges. Furthermore, there are false negative measurements, of course. If the true concentration in a sample is x, the LUT value, a measurement that is reported as 1.05 times x is a false positive reading; but a measurement reported as 0.95 x is a false negative.

DOE at minimum should do a careful analysis of how large the false negative problem would be—how much soil above background would not get cleaned up given the cumulative measurement error and the inflation of background by use of the USL.

Assume there is a distribution from x to 50x ppm of a particular contaminant in background, with a fairly even distribution throughout that range, and the USL is set close to 50x. And assume that measurements at SSFL of that contaminant in a particular area are also from x to 50x ppm, but that they are congregated around 45-50 ppm. Under the LUT, there would be no cleanup, even though clearly there is contamination above background – the mean and median values at SSFL considerably exceed the mean and median values of background. This is a false negative problem built into the LUTs that the EIS does not even mention. Additionally, the

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allowable 5% false positive error rate for measurement uncertainty for each constituent does not take into account the potential for a significant false negative measurement error rate, where the measurement purports to show the sample is below the LUT value when in fact it is above it. As one more sign of the imbalance in the EIS, its use as a tool for rationalizing breaking the AOC instead of being a neutral scientific document, the EIS only discusses false positive issues and not false negative ones.

p. 2-27 misrepresents even DOE's own analysis of background, by asserting that 42% of chemicals exceeded their respective AOC LUT values in at least one sample in the background study. A lay reader would think that 42% of the background area was above the LUT values. This is misleading. It is unclear what analysis DOE is referring to in this section; no citation is given. The full analysis should be provided for review. (It does not appear to be the discussion in appendix J, which doesn't support the claims made in this section of Chapter 2.)

The actual analysis in appendix J doesn't appear to even be based on the actual USL values for background, which, as indicated above, are strongly skewed to limit false positives.

In any case, none of this is within DOE's purview, and none of it is based on new information, post-AOC. DTSC decides the LUT values, not DOE. DOE proposed cleanup to background, with lookup table values specifying what background is and based on detection limits. There is no basis provided for violating what it signed.

Furthermore, DTSC held a public comment period on the draft background study that was used to establish the LUT values:

The California Department of Toxic Substances Control (DTSC) held a public-comment period from August 2 through September 4, 2012, on the Study's Draft Report for SSFL, dated July 2012. Over the course of that period, DTSC received comments from two (2) community members (an individual plus an advocacy group representative). DTSC prepared responses to the two sets of comments listed below in Sections A and B. In reviewing the submitted comments, DTSC determined that they did not require that the Study's Report be revised.

As seen, DOE did not even submit comments. Nearly five years later, in its EIS, DOE raises issues it should have raised back then and failed to. Similarly, DTSC established the LUT values years ago; if DOE had concerns, it should have raised those with its regulator long ago. But as made clear repeatedly, it is DTSC that is to establish background, LUT's, acceptable error rates for measurements, etc., not DOE. None of this material by DOE is relevant to an EIS, since these decisions are not DOE's to make.

The TPH argument on p. 2-27 is without merit. DTSC determined years ago the LUT value for total petroleum hydrocarbons (TPHs). DOE, far after the fact, says it doesn't like the value. It sat on its hands for years about this matter, but again, it is not its to decide; DTSC establishes the LUT values.

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623-60 Information was added to Appendix D of this Final EIS that identifies the background sample locations and chemicals that exceed the LUT values. At these two background sites, samples from 54 of the 208 locations sampled (about 25 percent of the sample locations) contained at least one chemical in a concentration exceeding its AOC LUT value.

The analysis of impacts in Appendices G and K for the Cleanup to AOC LUT Values Alternative is based using the established LUT values.

623-61 DOE's understanding of the implementability of cleanup in accordance with the 2010 AOC has evolved since 2012. As discussed in Chapter 2, Section 2.3.3.1 of this Final EIS, DOE determined that there were technical issues with implementing a cleanup according to the 2010 AOC. As a consequence, and in keeping with its responsibilities under NEPA, DOE developed two alternatives to the Cleanup to AOC LUT Values Alternative that meet the purpose and need of being protective of the environment and the health and safety of the public and workers. These two risk-based alternatives, the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, are presented in Chapter 2, Section 2.4 of this EIS. Refer to Section 2.1, "Preferences for Cleanup," of this CRD, for a description of why DOE considered alternatives to the Cleanup to AOC LUT Values Alternative.

623-62 DTSC did not sample the background location for TPH and therefore had no basis for the 5 ppm LUT for TPH. DTSC recognized this issue when it published its chemical LUT values and included the following footnote for TPH: "(3) For locations where TPH is the sole contaminant, a cleanup strategy will be considered based on the findings of the soil treatability study." The treatability studies have been completed and DOE has discussed the value of adjusting the TPH LUT value accordingly with DTSC. DOE does note that the soil treatability studies determined that between 300 and 500 parts per million of TPH-like chemicals observed in Area IV soil samples have a natural origin. When the AOC was signed, DTSC had not conducted a background study, picked LUT values, nor disclosed to DOE its intent on the values it did ultimately did select.

The statement that "there is nothing about TPHs that DOE couldn't have known when it signed the AOC" is false. DOE signed the AOC in December 2010, DTSC completed its soil background study (leaving out TPH) in December 2012, the soil chemical LUT values were not published until June 2013, and the soil treatability studies tied to the TPH issue were completed in 2014.

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DOE argues that two labs can't readily detect below 100 ppm. No evidence is provided that other labs are incapable of detecting below those levels. DTSC apparently identified labs that could and set the LUT value accordingly. It is up to DTSC.

Additionally, DOE argues that the LUT value was set without consideration of its natural presence. That isn't really true; DTSC set the LUTs based on detection limit and background values, whichever were greater. DOE argues, citing Nelson 205d, that organic molecules in soil could be getting reported as TPH. But Nelson actually reported that only 5-8% of the value of the TPH was due to naturally occurring material. 92-95% of the measured value thus is true TPH. The argument fails.

As repeatedly stated here, this is not DOE's call. DTSC sets the detection limits and background values, and from there the LUTs. If DOE has a technical issue with that, it should have raised it years ago with DTSC when the LUT values were established.

But even were there a genuine issue with the TPHs, and that appears questionable, it does not in any way provide a basis for breaking the legally mandated requirements of the AOC. DOE estimates that no more than 150,000 cubic yards of soil are contaminated with TPHs and/or PAHs and nothing else. It does not discriminate what fraction of that 150,000 cubic yards is exclusively TPHs, nor what fraction of that is TPH at levels it believes cannot be detected or is due to naturally occurring material. At best, this represents a small fraction of the total cleanup required under the AOC and in no way challenges the AOC itself.

Finally, there is nothing about TPHs that DOE couldn't have known when it signed the AOC.

Next DOE claims, p. 2-27 to 2-28, that there have been changes in site knowledge since the signing of the AOC. This is unconvincing.

First of all, DOE says that the EPA radiological study showed that approximately 70% of soil samples with radioactive contamination are within five radiological areas of interest. That provides no basis for questioning the agreement DOE signed – if anything, that should make cleanup easier.

It says there was a belief that there was widespread radioactive contamination at SSFL. And indeed, that has turned out to be true. Contamination was found, in addition to in those five areas of interest, throughout much of Area IV. It was found not just near nuclear buildings, but in areas where no nuclear activity occurred, showing that there were airborne releases and deposition (e.g., from nuclear fires at the hot lab, illegal burning at the burn pit, releases from reactor accidents like the partial meltdown) that transported the contamination from the source of the release to areas distant from it. So what we have learned is just what was expected; about 2/3 of the contamination is located near where the releases occurred, and the remaining 1/3 substantial distances away.

So there is nothing new; and to the extent DOE argues something is new (70% located in five areas of interest), that strengthens the case for the AOC, not weakens it. Indeed, DOE says of the five areas where the radioactivity is particularly bad "each of these areas were known to be

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The few locations where EPA found elevated concentrations of radionuclides were mostly locations that were subject to prior cleanup actions, and were known. EPA made it clear in its study conclusions that exceedance of a background threshold value, in itself, does not indicate the presence of radionuclide contamination. Most of EPA's results were small exceedances of the threshold values (EPA's Field Action Levels).

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impacted by radionuclides prior to EPA's study...." So why is this matter even included in the section on "changes in site knowledge since the signing of the 2010 AOC?" DOE knew these areas were contaminated when it signed the AOC, and the fact that there is contamination elsewhere just reinforces the need for cleanup.

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DOE argues that those five areas had been subject to prior cleanup to an approximate 9.2 pico/gram standard. It is not clear to what this is referring, as there are a number of different radionuclides present, each of which has a different cleanup level proposed in the 1999/2000 Boeing document referenced. The document to which this sentence did propose 9.2 picocuries per gram for Cs-137; but for other radionuclides, different standards were proposed.

However, these were proposed remediation standards; the sites in question were not actually cleaned up. DOE issued an EA proposing to use those standards, which would have left 99% of the contamination not cleaned up, and the court struck down the proposal.

In any case, it is clear from the EPA survey that contamination in excess of 9.2 picocuries per gram remains at SSFL. The EPA fact sheet summarizing their findings shows Cs-137 at 192 picocuries per gram, for example.

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More importantly, those proposed cleanup levels were orders of magnitude higher (less protective) than EPA's preliminary remediation goals (PRGs) for radionuclides. The EPA PRG for suburban residential exposure for Cs-137, for example, is 0.0303 pCi/g, three hundred times lower (more protective). For Sr-90, the PRG is 0.00361 pCi/g, compared to what Boeing proposed in the late 1990s of 36, about 10,000 times higher. For plutonium-239, Boeing proposed 33.9 pCi/g; today's EPA PRG is 0.00615 pCi/g, 5500 times lower.

623-64 In the Draft and Final EIS, DOE is not proposing a risk-based soil standard for radionuclides but instead will perform cleanup based on a using EPA CERCLA risk assessment principles. The comparison of the prior soil standard was only to illustrate that for the most part, prior soil cleanups met the standard. As stated in Chapter 2, Section 2.3.3.1, of this Final EIS, only about 12 percent of the samples collected and analyzed by EPA reported radionuclides above the EPA's FALS, and the majority of those were located within 5 areas of Area IV. DOE concludes based on these findings that radioactive contamination of Area IV is not widespread.

So, it is not clear that it is true that all the areas where EPA identified contamination had been "subject to prior soil removal actions by DOE to an approximate 9.2 picocurie per gram cleanup standard." DOE proposed to do cleanup and use that standard for cesium-137 and similarly extremely high (lax) standards for radionuclides, but the proposal was stopped by the court. And EPA found contamination present now at levels in excess of even those very lax proposed standards.

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Again, DOE claims that "only" about 12 percent of the samples exhibited radionuclide concentrations showing contamination. (The actual figure is 13%; see EPA Fact Sheet; 500 of 3735 samples had radionuclides above background, or 13.3%.) Roughly every seventh sample was contaminated. That is not something DOE should be boasting about.

623-65 The text of this EIS has been revised to accurately state the percent of samples exhibiting radionuclide concentrations exceeding threshold values. DOE notes that in its concluding guidance, EPA stated that exceeding a threshold level is not an indication of radionuclide contamination.

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It goes on to say that cesium-137 and strontium-90 were the primary radionuclides found, "consistent with site knowledge prior to the EPA study." Again, why this is in a section on "changes in site knowledge since the signing of the 2010 AOC" is puzzling – DOE is saying that this is not a change. And of course, cesium and strontium are precisely what one would primarily expect—they are primary fission products, with long half lives. And the fact that they are primary radionuclides found contaminating SSFL is not a reassuring fact. They are extremely biologically dangerous. Cesium-137 is a powerful gamma emitter; strontium-90 concentrates in bone and can cause bone cancer and leukemia; they are very bad actors from a

623-66 The EPA radionuclide study was completed in 2014 confirming site information available when the AOC was signed in 2010. While finding the radionuclides that were found was not surprising, the extent of the contamination was not as extensive as generally perceived by the public. The SSFL, including Area IV, is fenced and is not accessible for the routine grazing of cattle.

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health standpoint, and persistent in the environment, with an ability to concentrate from soil into vegetation and into humans. The presence of cows grazing on Area IV and nearby is especially troubling, because of the capacity of strontium-90 in particular to concentrate in grass, then in the cow, then in the milk, then in the body of the child or adult drinking the milk. It was strontium-90 bioaccumulation in children during the atmospheric fallout period that in part led to the partial test ban in the early 1960s.

DOE concludes this paragraph with another misleading statement: "As a result, the EPA findings disproved the general belief that Area IV is highly contaminated by radionuclides throughout." Does this mean it is highly contaminated in many places, but not everywhere in Area IV? Or is DOE trying to say that there is contamination in many parts of SSFL, but not all? Or that the contamination is not "highly contaminated?"

A couple of key facts about radiation are important here. High levels of contamination can produce acute radiation syndrome, the kind of extreme prompt health effects seen right after the atomic bombings of Hiroshima and Nagasaki where people got such large doses that they died within days. No one is talking about radiation levels like that at SSFL, or any other contaminated site in the U.S. That is simply a red herring.

What one worries about from radioactive contamination at DOE and similar sites are latent effects – increased incidence of solid cancers, leukemias, genetic effects, heart disease, etc. – that have a latency period of years before evidencing themselves. It has long been established that there is no safe level of radiation exposure – all doses increase the risk of these latent effects, with the greater dose producing the greater increase in risk.

One aims to limit that increased risk to one in a million (10^{-6}) – see, e.g., EPA CERCLA guidance. DOE claims in the EIS that that is the risk it is proposing for its Alternatives 2 and 3. But the radioactive contamination levels EPA found remaining at SSFL far exceed those risk levels. The 196 pCi/g of Cs-137 found, for example, is 6500 times higher than a one in a million risk level, according to the EPA PRG calculator for residential uses. The strontium-90 found at 21.3 pCi/g at SSFL carries with it a risk 6000 times higher than the 10^{-6} goal for suburban residential exposure. For agricultural exposures the risks can be even greater. These are not trivial concentrations, as DOE would appear to imply.

So, the first paragraph of the section on changes in site knowledge since the AOC was signed identifies no changes whatsoever.

The remaining two short paragraphs that try to make the case for new knowledge that would support breaking the AOC fail to provide any such support. DOE states, "What was not clearly known at the time of the signing of the 2010 AOC was the extent of soil contamination by chemicals." First of all, DOE should have known; it contaminated the soil with those chemicals. But secondly, the discovery that there was much more contamination than DOE had presumed before argues for more cleanup, not less. The new information is that there is much more contamination than DOE thought before. That logically can only support more cleanup, not the abandonment of existing cleanup obligations and leaving in place vast quantities of contaminated soil.

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623-67 The statement in the Draft EIS was attempting to convey that EPA's data show that radionuclide contamination is restricted to a few locations in Area IV and is therefore not widespread. The text of this Final EIS was revised to clarify that the extensive soil sampling performed by EPA and DOE and the review of those data by EPA and DTSC show that radioactive contamination is restricted to about 12 locations (and the majority of those were located within 5 areas of Area IV). Please see Section 2.10, "Public Perceptions About Waste and Contamination in Area IV," for additional information.

623-68 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. Neither an agricultural scenario, nor a residential scenarios that include consuming products grown in a backyard garden, are appropriate for property that would be restricted to an open space land use.

The locations with the higher levels radionuclide contamination would be targeted for cleanup under all three action alternatives. In this Final EIS, under the Cleanup to AOC LUT Values Alternative and the Cleanup to Revised LUT Values Alternative, radionuclides would be cleaned up to LUT levels. Under the Conservation of Natural Resource Alternative, radionuclides are analyzed for cleanup commensurate under two scenarios: 1) a recreational user consistent with the designation of the property as open space (the Open Space Scenario), and 2) residential (without garden) land use scenarios (the Suburban Resident Scenario). The Open Space Open exposure scenario evaluated by DOE is appropriate for the future open space use for SSFL, while the Suburban Resident Scenario provides a conservative analysis for comparison.

623-69 These comments have been addressed in the responses to previous comments. Please see the responses to comments 623-20, -56, -59, -62, -63 and -66.

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The argument DOE makes is that it wants to break the AOC because (1) AOC values are supposedly low, (2) purported false positive issues, and (3) the claim that TPH readings were in fact in part due to other organic molecules. We have shown above how each of these claims is wrong and do not in any way justify breaking the cleanup commitments. AOC values are not low—they are comparable to or exceed true risk based screening levels for suburban residential exposures, let alone agricultural. The false positive issue is incorrectly presented; it posed no problem when more than a hundred radionuclides were analyzed for, and can only increase somewhat the total soil cleanup required, whereas the false negative issue, ignored by DOE, works in the precise opposite direction and results in failing to clean up much that is contaminated. Furthermore, the USL statistical choice for background had inflated background so as to narrowly limit false positives while significantly increasing the chance for false negatives. And the TPH matter is wrong; DOE's own Nelson study indicates naturally occurring material represents only 5-8% of the TPH; and even were there a TPH issue, it results in only a fraction of the 150,000 cubic yards DOE says are contaminated with TPH and/or PAHs alone, with 90% of the soil DOE now estimates being contaminated having other contaminants that would necessitate cleanup. These are all straw men.

The entire premise of the EIS—with all alternatives breaching the legally binding AOC—has to rest on some new information that DOE did not have or could not have had when it proposed and signed an agreement to cleanup to background. It rests instead on a few sentences on p. 2-28, none of which provides such a basis.

Essentially DOE now says it had no idea how badly it had contaminated SSFL, and because the contamination is far greater than it had realized, it should be allowed to clean up much less. This of course makes no logical, scientific, or public health sense.

Finally, DOE argues that it would be difficult to get offsite fill that meets the LUT for all constituents. That argument is unavailing. First of all, only two constituents of Gillibrand fill are reported as possibly exceeding the LUT value, and both just barely. The LUT value for one is 3.9 and the value reported is 4; but it is tagged "J", for measurement is just an estimated value for which there is not confidence. The second one (measured at 1.09) is similarly close to the LUT value (0.86) but also reported as an estimated value. For all practical purposes, they are at the LUT value and, given that neither is a value that is better than an estimate, neither therefore demonstrates it is above the LUT value. Were this a measurement at SSFL, DOE would have replicated the measurement and if it came back lower, thrown out the higher value. Now, when it is to its advantage, it does the opposite.

(A third measurement is highlighted, again tagged "J" and the estimated value is not much different than the LUT; but the MDL is higher than the LUT value, so there is no confidence that the estimated value is in fact above the LUT.) Additionally, DOE itself says there is no health risk from those minor exceedances.

But the key is that even if it were true that the Gillibrand soil slightly exceeds the LUT value for a couple of constituents—which is not demonstrated—that doesn't make the AOC in need of abrogation. The AOC has provisions, which, in fact, DOE has recently invoked, that if

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623-70 DOE notes the 2010 AOC does not allow to determine that a backfill source that is "close enough." Therefore, the two LUT values exceeded by the Gillibrand soil make it unacceptable as backfill according requirements of the 2010 AOC. As stated in the AOC, all chemicals above the LUT values are exceedances and should be remediated. Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source. As stated in this EIS, DTSC does have the authority to change this requirement. DOE has initiated consultation with DTSC on this subject, as is required by the 2010 AOC. The responsibility for identifying backfill ultimately lies with DTSC per the 2010 AOC, which states: "If an onsite or offsite source of backfill soils that achieves all LUT values cannot be reasonably found, then DTSC, DOE and EPA shall enter a consultation process and DTSC shall determine the best available source of backfill." It should also be noted that DOE evaluated the sites DTSC identified as clean background sites. The background sites should be reasonable candidate locations for backfill as they have similar lithology and chemical makeup as Area IV and have not been affected by SSFL operations. But the soil cannot be used as backfill because 42 percent of the chemicals analyzed by DTSC for the identified background sites exceeded their AOC LUT value in at least one sample and at about 25 percent of the background points at which samples were taken at least one chemical exceeded its AOC LUT value.

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replacement soil exceeds LUT values in any way, DOE and DTSC shall confer and DTSC shall decide which is the best replacement soil under the circumstances. So the Gillibrand soil can readily be used, without any challenge to the AOC; the AOC contemplated this issue and allows it.

Thus, none of the arguments in §2.3.3.1 is scientifically valid. None of the arguments represents something new that DOE couldn't have known when it signed the AOC. All that has changed is that DOE wants to break its commitment.

We discuss the four alternatives in our summary statement, and the issues with those alternatives are well dealt with in the comments by the City of Los Angeles, NRDC and CBG, in which we join, so we will not detail the problems here.

appendix B

B.1 Land Use

The DEIS says that the proposed activities could cause potential impacts "if they displace or cause a change in land use that conflicts with an applicable land use plan, policy, or regulation of Ventura and/or Los Angeles County, including general plans, any specific or area plans, and zoning ordinances..." This is true, and all 3 options considered would do so, but none of those impacts is admitted or analyzed.

The Ventura County zoning and general plan for the SSFL land allows, according to the County, "allow for a wide array of both residential and agricultural land uses."⁵ Those residential uses allow for vegetable gardens, fruit trees, etc. The agricultural uses include "a wide range of crops and fruit-bearing trees" and a "wide range of animals, including cattle (ranching), horse ranches, etc."⁶ Indeed, SSFL, before Rocketdyne, was a working farm/ranch, the Silvernale Ranch, and cows from neighboring agricultural areas still graze at and near the contaminated site.

The longstanding position of DTSC and EPA is to rely heavily on local zoning and general plan designations for determining the cleanup level required for a contaminated site. Nowhere in the DEIS, however, is there any analysis of the agricultural exposure pathway, which generally produces far higher estimated risks and concomitantly far lower and more protective cleanup standards than those on which the DEIS is based.

Similarly, nowhere in the DEIS is there an analysis of suburban residential use with garden, a scenario also allowed under the zoning and general plan. So despite the assertion in B.1.2. that a key impact driver is the zoning and general plan allowable land uses, what DOE now proposes

⁵ Letter, Kim Prillhart, Director, Ventura County Planning Department, to Mark Malinowski, DTSC, July 20, 2015.

⁶ *ibid.*

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Please refer to the response to comments 623-10 and 623-36. Text of this Final EIS was revised to identify open space as the future land use consistent with the Boeing conservation easements (Ventura County 2017a, 2017b).

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would result in leaving contamination levels that would interfere with most of the uses allowed by the zoning and general plan.

Boeing assertions about its intentions regarding the future use of land are irrelevant to this determination, as responsible parties do not get to determine the cleanup level of contamination on their land by preemptively restricting the future use.

B.1.3.1. The DEIS correctly notes that Area IV is zoned agricultural, but fails to disclose either that this allows residences nor that the "Open Space" designation for the NBZ is a zoning designation that allows agricultural uses. Similarly, the DEIS does not disclose that the "open space" general plan designation allows a wide range of residential and agricultural uses.⁷

B.2 Soils

This section fails to analyze the effect of the contamination on the soils, including those offsite subject to migration of onsite contaminants.

B.3. Surface Water Resources

Following the same pattern throughout the EIS, it only examines the negative impacts from cleanup, failing to examine the negative impacts of the contamination and those impacts were DOE to fail to clean up all the contamination, so that surface water would continue to be contaminated and migrate offsite, carrying contaminants into other water bodies. There have been approximately 200 exceedances of pollution limits and benchmarks in recent years, and over a million dollars in fines, due to contamination leaving the site in surface water at elevated levels.

B.4. Groundwater

The same fundamental problem applies here; impacts of cleanup on groundwater are identified as impact drivers, not the contamination of groundwater itself and the impact of failing to clean it up. Groundwater contamination plumes have already migrated offsite.

This section contemplates not cleaning up the groundwater, but rather walking away from the contamination, in part claiming natural attenuation. It focuses on tritium, but there are numerous other contaminants in the groundwater and walking away from the contamination rather than cleaning it up is no solution and violates the AOC and 2007 Consent Order.

Indeed, migration of contaminants from SSFL appears to have already affected the Aroyo Simi and has infiltrated into and contaminated significant groundwater sources in Simi Valley.⁸

⁷ id.

⁸ See Ali Tabidian, Ph.D. *Land-use conversion and its potential impact on stream/aquifer hydraulics and perchlorate distribution in Simi Valley, California*, October 2006, prepared for the SSFL Advisory Panel, established and funded by the State Legislature to oversee studies of health impacts from SSFL.

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623-72 Please see Appendix B, Section B.9, for a discussion of the impacts from contaminants. Also, please refer to the Topics of Interest, "Public Perceptions about Waste and Contamination in Area IV" (Section 2.10 of this CRD) and "Offsite Impacts" (Section 2.7 of this CRD) for discussions of these topics and DOE's responses.

623-73 All of the soil remediation action alternatives addressed in this EIS would involve removal of contaminated soil and are protective of the health and safety of the public and the environment. Exceeding a LUT value for any chemical or radionuclide does not mean that contamination is present nor is it an indication of risk posed to onsite or adjacent land users. This includes potential runoff following soil remediation. In addition, the LARWQCB has made it clear during several community meetings that exceedance of a LARWQCB NPDES permit stormwater benchmark does not mean that the chemical exceeded a risk-based standard. The benchmarks have been set below risk-based standards. Regardless, there have been a limited number of exceedances of stormwater benchmarks in recent years with the reduction due to extensive upgrades of stormwater measures implemented by Boeing. As noted in Chapter 3, Section 3.3.1, there were multiple exceedances of regulatory limits in the years immediately following the 2005 wildfire. These exceedances have diminished over time, with exceedances only for iron in 2011 and 2012. There were no exceedances for outfalls receiving discharges solely from Area IV in 2013, 2014, 2015, 2016, or 2017. This Final EIS includes additional discussion on risk remaining following soil removal.

623-74 The statement that groundwater plumes have already migrated offsite is incorrect. The Area IV monitoring well network sample results demonstrate the plumes remain within Area IV and the NBZ. Perchlorate has not migrated beyond the boundaries of Area IV. There is no evidence of any Area IV groundwater contaminants resulting in "significant" groundwater contamination in Simi Valley. Appendix B, Section B.4, of this EIS, describes the methodologies used to evaluate the impacts on groundwater resources from implementing the alternatives. The impact drivers, in this case, would be the elements of the alternatives. Section B.4 has been revised to state that the length of time required to achieve cleanup goals under the monitored natural attenuation is an impact driver. As described in Chapter 2, Section 2.6.3 of this EIS, several active groundwater remediation measures (including pump and treat, soil vapor extraction, and source removal) are considered as part of the Groundwater Treatment Alternative. In addition, this EIS does not just focus on tritium; it assesses measures for solvents and strontium-90. As described in Chapter 3, Section 3.4.3, of this Final EIS, the monitoring well network established for Area IV and the NBZ demonstrates that the contaminants are primarily shallow (less than 100 feet below ground surface), have not moved downward through bedrock fractures more than 200 feet, and have not moved

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B.5 Biological Resources

One again, the only “impact drivers” identified are those that support an argument for not cleaning up. No analysis of the impact from the contamination from not cleaning up much of it. No comparison is provided to the ecological RBSLs, which are in fact orders of magnitude lower than the cleanup levels proposed by DOE and thus the proposed actions would impact the biological resources by continued exposure to the contamination.

Whereas at least the human health impact section (discussed below) mentions as a potential impact “chemical and radioactive constituents in the soil could pose a threat” to future people on site, the biological features section does not even consider that the contamination on site could pose a risk to the biological features.

It is an extraordinary omission for DOE to not include the ecological RBSLs as thresholds for evaluating impacts for biological features. It creates the impression that the exclusion was because the ecological RBSLs are so much lower than the cleanup standards DOE is now proposing that it is clear the proposal to not clean up much of the contamination would far exceed the thresholds for injury to biological features from that pollution. This is a critical deficiency.

B.9 Human Health

B.9.2. claims impact to be assessed is to a future onsite suburban resident, failing to disclose they are not examining a suburban resident exposure scenario, but one hundreds or thousands of times less, by leaving out the backyard garden. Similarly, no impact on agriculture, for which the site is zoned, is considered.

Additionally, the DEIS only examines human health impacts *onsite*. One of the critical drivers of impacts, and concern, is the potential offsite impacts. Whether people ever again live on or run agricultural operations on the property, they do so nearby. Use of RBSLs that are orders of magnitude more lax than those that include a garden or address agricultural exposure pathways can result in people offsite engaged in those activities being exposed to unacceptable risks, even assuming some dilution of concentrations. And contaminants can actually concentrate offsite, as seen in the perchlorate contamination at Dayton Canyon.

Moreover, the impact evaluation only considers impacts from contaminated soil, not contaminated groundwater, surface water, or air. Elsewhere in the EIS it is argued that the risk from the polluted groundwater will not be considered because purportedly the flow rate out of wells onsite is too low for domestic use. However, as indicated elsewhere herein, the actual source cited provides no support for that claim and to the contrary shows high flow rates from some wells. Groundwater was used at SSFL for decades in large quantities for many uses, including drinking. Indeed, contamination led to the loss of the potable use of that critical

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laterally off of DOE-administered areas of Area IV and the NBZ. Please refer to “Offsite Impacts” (Section 2.7 of this CRD) for a discussion of this topic and DOE’s response. There is no known contamination in Arroyo Simi associated with activities in Area IV. The referenced paper (Tabidian 2006) was reviewed and was found to pertain to perchlorate, a rocket engine ignitor. Perchlorate was not used in Area IV and the NBZ.”

623-75 The EIS was revised to reflect cleanup levels for the Conservation of Natural Resources Alternative that are based on human risk as well as ecological risk. Inclusion of this analysis more quantitatively addresses ecological risk receptors under the alternatives.

623-76 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. They permanently bind the property, regardless of who owns the land. North American Land Trust will monitor and enforce the easement. The use of RBSLs that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing’s conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space. Also see Section 2.1, “Preferences for Cleanup” of this CRD for a discussion of commenters’ preferences for alternatives or cleanup levels.

623-77 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE’s response to concerns about offsite impacts.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local offsite residents may get some portion of their food from a home garden.

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resource. And Brandeis Bardin Institute, the camp abutting SSFL, sued Boeing alleging in part that BBI had to give up its use of groundwater for human use because of SSFL contamination.⁹

B.9.3.2

Again, over and over again, the DEIS falsely states that its alternatives involve cleanup to the risk-based values for a suburban resident from the SRAM. However, the SRAM specifies SRAM-based RBSLs for a suburban resident with a garden that are orders of magnitude more protective than the values DOE actually used. Additionally, this assumes for all alternatives that radionuclide concentrations would be reduced to AOC LUT values or DOE's proposed RBSLs. In truth, under all alternatives, hundreds of thousands of cubic yards of contaminated soil wouldn't get cleaned up at all, based on improper claims of exemptions.

B.9.4 Evaluation of Impacts

DOE evaluates the health impacts through two measures, both of which are inappropriate and misleadingly described.

Firstly, DOE Order 458.1 does not apply. The AOC is the true governing document. And even if it was not, the 1995 Joint Policy with EPA applies, which requires the use of EPA guidance. That guidance bars the use of dose, unless there is an ARAR deemed protective by EPA, and the dose limits in Order 458.1 exceed the threshold for an acceptable ARAR. The entire purpose of the DOE-EPA Joint Policy was that DOE Orders such as 458.1 cannot be used for cleanup of DOE sites, whether or not on the NPL, only EPA CERCLA guidance.

Additionally, the DEIS misrepresents DOE Order 458.1 as setting a limit of 10 millirem per year to the maximally exposed member of the public from DOE activities. In fact, Order 458.1 sets a limit ten times that. See section 4.b.(1)(a) "public dose limit." In apparent recognition of the misleading nature of the statement, DOE says the DOE standards "invoke the NESHAPS limit of 10 millirem per year." NESHAPS (National Emissions Standard for Hazardous Air Pollutants) are, as the name states, restricted to air pollutants. Whereas a 10 millirem limit for air pollutants might be an ARAR, the rest of Order 458.1, governing soil and other media and allowing doses of 100 millirem. That is far outside the acceptable dose for an ARAR, and EPA does not allow the use of DOE Order 458.1 for cleanup of sites pursuant to its CERCLA guidance¹⁰, and DOE is required to use standards at least as protective as EPA's CERCLA guidance for cleanup of its sites.

Again, because DOE, for every citation it gives, provides no page #, we cannot readily determine where in Order 458.1 it claims is the basis for this assertion. The only references we can see to NESHAPS are requiring analyses of exposures to air pollutants so as to demonstrate compliance with EPA's NESHAP rules at 40 CFR Part 61. Again, that is limited to air pollution, not soil contamination or that of other environmental media. Order 458.1 allows 100 millirem for those

⁹ Third Amended Complaint for Damages to Real Property and Declaratory Relief, June 7, 1996

¹⁰ See EPA Q&A document

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623-78 The statement that the EIS "only considers impacts from contaminated soil, not groundwater, surface water, and air" is incorrect. Sections 3.4 and 4.4 address groundwater, Sections 3.3 and 4.3 surface water, and Sections 3.6 and 4.6 air quality. Additional discussion of human health risks is included in Section 4.9. Groundwater contaminants have not moved beyond Area IV and the NBZ and there are no on-site receptors for groundwater to conduct a risk assessment. Nevertheless, Section 4.4.3 provides descriptions of the active remediation measures being considered by DOE to reduce Area IV groundwater contaminant levels to drinking water standards. Please see the response to comments 623-76 and 623-77. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

623-79 Please see the response to comment 623-110. Please see Section 2.6, "Comparison of Radiation Doses," of this CRD for a discussion and DOE's response to concerns regarding the use of DOE Order 458.1 and a 25 millirem criteria. DOE is required to comply with DOE Order 458.1 along with any other ARARs or agreements. DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem per year upper limit and are in a range that is consistent with the CERCLA target risk range.

623-80 In the context of Appendix B, Section B.9.4 of the Draft EIS, the bulleted items are a listing of all relevant thresholds for comparison. The reference to a 10 millirem per year limit is in the context on NESHAPS requirements for air emissions. Because air emissions are possible and have been considered, this is a relevant ARAR. The 25 millirem per year is the dose limit for clearance of property from DOE Order 458.1 (Section K). DOE Order 458.1 also includes a requirement that DOE consider as low as reasonably achievable (ALARA) when determining cleanup levels. Applying ALARA principles is intended to maximize the total benefits of the radiation protection provisions of a DOE activity. Please also see the response to comment 623-79 for further discussion of the dose limit.

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exposures—the equivalent of a chest X-ray a week, for decades, which EPA says is non-protective.

Order 458.1, at Section e.1(b) would appear to require inclusion of dose from food and water, which DOE refuses to do in the DEIS. It appears to rely on 458.1 when it wants to and ignore it other components of it in its own risk assessment.

The second criterion DOE puts forward to evaluate impacts is whether its estimated lifetime cancer risk is between 1×10^{-6} to 1×10^{-4} . This misstates the requirements, by incorrectly suggesting that anything below 1×10^{-4} is presumptively safe and acceptable. However, the contrary is true. Under CERCLA (and similarly with RCRA), one aims for a 1×10^{-6} cancer incidence risk. That is risk on which Preliminary Remediation Goals and RBSLs are based. If a Responsible Party believes it cannot readily meet that risk level, it can propose falling back on higher risk, if it can demonstrate that it meets the nine balancing and other criteria, and its regulator approves based on that showing, and then only falls back as far as absolutely necessary, getting as close to 10^{-6} as possible.

DOE has said its 2nd and 3rd options would clean up to a 10^{-6} cancer risk, and that is what should be demonstrated in the impact analysis. And since DOE's claim is based on leaving out the agricultural scenario entirely, and leaving out the primary risk contributor to the suburban residential scenario, the garden, it is clear that the actual risk from its options far exceeds 10^{-6} , and indeed, far exceeds even the extreme upper limit of the acceptable risk range, which one can only be allowed to approach under a showing of exceptional circumstances. Under the AOC, no risk assessment was to be done; it is to be a cleanup to background. If DOE ignores that and still does an impact analysis, it should be demonstrating that the cleanup will result in a less than 10^{-6} risk for a suburban resident with a garden and for the standard EPA assumptions for agricultural use. Furthermore, this must be based on the actual measured concentrations of contaminants, not a fictional number in which the real value is dramatically reduced by averaging over a wide area.

B.10.3.2

The DEIS asserts that disposal of waste would be done pursuant to a twenty-year-old DOE 1997 ROD and Programmatic EIS for dealing with waste generally. That is not correct. Waste disposal from SSFL is governed by the AOC, which expressly dictates that any waste – including from structures, debris, and other anthropogenic materials – with radioactivity above background must be disposed of in a licensed low level radioactive waste (LLRW) site or an authorized federal low level radioactive waste site.¹¹

For some reason, the DEIS does not use the legal term LLRW, which is also used in the AOC, but instead refers to "LLW." This should be clarified, as it appears to suggest an attempt to avoid the requirement of the AOC that all waste above background go to an LLRW site.

The definition given in Table B-2 does not include the definition/requirements from the AOC and should.

¹¹ AOC §1.8.1, 1.8.4, and p. 3, Appendix B

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623-81 DOE Order 458.1, Section 4.e.1 (b) requires modeling of likely exposure pathways and food is only listed as an example. Please see the response to comment 623-99 for a discussion of likely pathways.

623-82 Please see the response to comments 623-99 relative to applicable pathways, 623-103 relative to averaging, 623-110 relative to EPA CERCLA requirements, and 623-55 relative to risk limits.

623-83 The AOC does not govern the disposal of wastes generated during building demolition or soil excavation. Disposal of wastes is governed by existing Federal and State laws, rules, and regulations. The AOC states that all actions taken by DOE and DTSC must be in compliance with Federal and State laws and regulations. The cited ROD reflects DOE's decision based on the analysis in the cited EIS to establish regional LLW disposal at two DOE sites, including the Nevada National Security Site, and to not preclude DOE's use of commercial disposal facilities consistent with DOE order and policy. DOE's decision in that ROD is applicable independent of the 2010 AOC. As discussed in the response to comment 623-85, each DOE building in Area IV will be surveyed in accordance with an approved survey plan to determine the disposition of building materials during and after demolition. The radionuclide and chemical content on and within buildings or structures will be determined in accordance with decisions made pursuant to this Final EIS, regulatory requirements, and approved procedures. The approved plans and procedures will describe the activities that DOE will perform to sample and characterize DOE's remaining buildings to determine whether they are contaminated with radiological or chemical contaminants, and to determine appropriate handling methods for managing and disposing of demolition debris. This information was included in Appendix D, Section D.1, of this Final EIS.

623-84 While used in the AOC, the term LLRW (low-level radioactive waste) is not defined in the AOC. LLW (low level waste) is an abbreviation and is a term commonly used in a variety of NEPA documents rather than LLRW; both terms describe the same material. Appendix B, Table B-2, provides a definition of LLW for purposes of this EIS, and this definition is derived from Federal law (i.e., the Low-Level Radioactive Waste Policy Act of 1980 [Public Law 96-573] and its 1985 amendments [Public Law 99-240]). A statement was added to Chapter 4, Section 4.10, of this Final EIS that all wastes generated from the activities evaluated in this Final EIS will be disposed of in facilities that are licensed or permitted to accept the wastes.

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Furthermore, the description of typical waste streams is deeply problematic. It describes LLW as, for example, "debris from removal of Area IV buildings with a radioactive history that is managed as LLW." This is circular – all debris with radiological history is LLW. LLW is any material above background, as set forth in the AOD. Secondly, this implies that the determination of whether something is potentially LLW is based on whether the building has a known radioactive history. This is unacceptable. The knowledge of what went on at SSFL over 70 years is extremely dubious. The fact that DOE today claims it has no memory of radioactive activity in a particular building is in no way dispositive. Time and time again we have seen situations where buildings assumed to not have had nuclear activity did in fact. Additionally, since the buildings where such activity did occur often had accidents that resulted in releases to the environment, contaminating soil at substantial distances, one must assume all buildings are potentially contaminated. They need to be thoroughly measured. There is no indication that that even surveys have been or will be done.

Additionally, there is no discussion of how background will be determined for buildings. Will one use other buildings at SSFL, which, rather than being background can in fact be contaminated themselves?

At the heart of the concern is that the AOC requires everything, including building debris, over background to go to a LLRW site, and the EIS seems to sidestep the issue, suggesting that it may intend to breach this requirement of the AOC as well. Elsewhere in the EIS, as discussed later herein, DOE says it relies on 25 millirem per year above background and Reg. Guide 1.86 contamination levels above background to determine whether to release a building. If that is the intent, it should be directly declared; and it would directly violate the AOC, and be non-protective of public health.

B.11.3 Cultural Features

DOE once again appears to try to expand the criteria for exemption in the AOC which is limited to Native American artifacts that are officially recognized.

B.14 Sensitive-aged populations

Because of the failure of the DEIS to address impacts on offsite populations from the SSFL contamination, it also fails to analyze the impacts of sensitive-aged populations, and other sensitive groups. For example, the DEIS assumes exposures for 30 years, 6 of which are as a child; but it does not use the greater cancer risk that a child has compared to an adult, or for that matter, the greater risk to females, in assessing risk.

Appendix C

DOE committed in 2012 that the purpose and need for the EIS would be to carry out the cleanup requirements for groundwater found in the 2007 Consent Order and for soil in the 2010 AOC. It committed that the scope of the EIS would be limited to how to clean up the soil to background, not whether to.

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623-85 The statement about "debris from removal of Area IV buildings with a radioactive history" refers to the description of typical waste streams in Appendix B, Table B-2 of this EIS. The intent is to distinguish between waste from a building with a radioactive history that must be managed as radioactive waste and waste that need not be so managed. It is not clear that all debris from such a building would be considered radioactive waste. Given this, for purposes of EIS analysis, only projections were made of the various types of wastes that would be generated from building demolition. These projections were made considering the history of each building – e.g., whether the building had a history of radioactive operations. (For purpose of analysis, all waste from a building with a radioactive history was assumed to be LLW or MLLW.)

In preparation for demolition activities, surveys of building structural materials for the presence of radioactivity would be conducted.

Irrespective of the past history of these buildings, DOE proposes to survey each DOE building in Area IV in accordance with an approved survey plan to determine the disposition of building materials during and after demolition. The radionuclide and chemical content on and within buildings or structures will be determined in accordance with survey plans and procedures made pursuant to this Final EIS, regulatory requirements, and approved procedures. (Waste determined to be LLW from the buildings within RMHF and Building 4024 would be managed and disposed of off site as radioactive waste. In this EIS, waste determined to be LLW from other buildings that have a radioactive history was also assumed to be disposed of as radioactive. While waste only from Buildings 4038, 4057, 4462, and 4463 is not assumed to be radioactive, these buildings would be surveyed for the presence of radioactive material and waste material disposed of appropriately after demolition.). The approved plans and procedures will describe the activities that DOE will perform to sample and characterize DOE's remaining buildings to determine whether they are contaminated with radiological or chemical contaminants, and to determine appropriate handling methods for managing and disposing of demolition debris. This information was included in Appendix D, Section D.1, of this Final EIS. With respect to buildings, Footnote 1 of Appendix D of the Draft EIS. refers to a 25-millirem criterion. Footnote 1 of Appendix D has been deleted from the Final EIS. Also deleted in the Final EIS are any references to Regulatory Guide 1.86.

With regard to the commenter's statement that "LLW is any material above background, as set forth in the AOC." The AOC did not make that statement. Rather it identifies a requirement that soils contaminated above local background be disposed of at a licensed LLRW disposal site. DOE notes that in its concluding guidance,

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During the public scoping process, at the hearings and in the written comment period, the great majority of commenters insisted that DOE live up to these pledges. Rather than acknowledge this, however, DOE instead creates the false impression that the public asked DOE to break the AOC and its EIS promises and by doing an EIS that violates the AOC. The great majority of the public loudly said no to this. DOE in Appendix C buries this fact, consolidating as single entries similar comments from large numbers of people insisting DOE comply with its promises. At the same time, DOE decided to count as numerous individual entries the multiple submissions of a small number of individuals, often associated with the polluters of SSFL, urging DOE to break the 2010 and 2007 commitments.

Appendix D

D.1 asserts that some of the 18 remaining DOE buildings were “not impacted by site radiological operations” but there is no proof provided for that statement. Since there is widespread contamination of soil in Area IV, demonstrating that contamination did not remain inside buildings, and much of the release was airborne with subsequent deposition on surfaces, there is no basis for asserting any building was not impacted by site radiological operations. No data are provided showing thorough measurements of those buildings to determine they are contaminant-free; relying on “process knowledge” (what they think went on in the buildings over many decades is inadequate, as time and again one has found activities occurred that one didn’t have records of years later, or people may have tracked contamination in, etc.

Footnote 1 asserts some buildings were “free released,” and cites as the standard for that contamination levels producing 25 millirem per year or the levels found in Regulatory Guide 1.86. Both of these standards violate the AOC and also the 1995 Joint Policy with EPA requiring cleanup of DOE sites meet EPA CERCLA guidance. As discussed elsewhere herein, EPA has long declared 25 millirem/year to be “non-protective” and cannot be used pursuant to its CERCLA guidance.

Regulatory Guide 1.86 was issued in 1974 by the Atomic Energy Commission, which no longer even exists. It was not intended as a risk-based standard for cleaning up contaminated buildings, but instead was based solely on what hand-held radiation detection equipment in the 1960s could readily detect. EPA CERCLA guidance bars RG 1.86s use, absent exceptional showings that have not occurred here (i.e., DOE must request of EPA that it be allowed to be used, demonstrating some overriding need to do so and that it would be protective within EPA’s standards, and the EPA Region must request concurrence from EPA HQ).¹²

EPA guidance is to use its PRG calculators (Q&A Q16)—not 25 mrem/year or Reg Guide 1.86. EPA guidance is to use risk, not dose. (Q33) Dose can only be used in very limited circumstances, when there is an ARAR (a formal “applicable or relevant and appropriate requirement”), but only when the ARAR is 12 millirem/year or less. There is no ARAR of 12 mrem/year or less besides Maine’s state standard. DOE’s 25 millirem/year standard is thus not an ARAR and cannot be used.

¹² See EPA “Radiation Risk Assessment at CERCLA Sites: Q&A,” OSWER 9285.6-20, Q10.36.

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EPA stated that exceeding a threshold level is not an indication of radionuclide contamination. Therefore, soil exhibiting radioactivity levels above a LUT value may not be contaminated soil.

- 623-86 “Background” is not applicable to building material. DOE proposes to remove 100 percent of the building structure and dispose of the debris in accordance with the waste characterization determined through surveys and sampling.
- 623-87 Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD for a discussion of the process that will be used to determine exemptions.
- 623-88 This Final EIS addresses the impacts on offsite populations from the releases of radioactive and chemical contaminants into the air that could occur during site remediation activities. The analysis follows a standard risk assessment methodology that includes risk factors that account for gender and various ages, (see Chapter 4, Section 4.9.1.1 of this EIS). The human health analysis determined that for any alternative or combination of action alternatives, the incidence of cancer or a cancer fatality to a member of the public following Area IV and NBZ remediation would be very low and dominated by impacts from background levels of chemical and radioactive constituents. Because of this there would be no disproportionately high or adverse impacts on any individual group, including sensitive aged populations (children and the elderly) and females.
- 623-89 The specific wording of DOE’s purpose and need has been refined since it was first stated in the 2007 Advance Notice of Intent, but the overall message expressed by the statement has remained consistent. Thus, DOE needs to remediate those portions of SSFL for which it is responsible in a manner that is protective of the environment and the health and safety of the public and workers. See the response to comment 623-45. All comments are treated equally; DOE evaluated a broad range of reasonable alternatives that meet the purpose and need based on input from stakeholders (see Chapter 2, Sections 2.3 and 2.4 of this EIS). Including alternatives in addition to a cleanup to AOC values allows for a fair and reasonable comparison of potential impacts and is required by NEPA. Please refer to “Compliance with the 2010 Administrative Order on Consent” (Section 2.2 of this CRD) for a discussion of this topic and DOE’s response.
- 623-90 The EPA Final Historical Site Assessment, Santa Susana Field Laboratory Site, Area IV Radiological Study, Ventura, California (HGL 2012a) provides insight into which

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The AOC covers all structures, debris, and anthropogenic materials and requires their cleanup to background

623-92

D.2 says they used a Hazard Quotient of 1 on p. D-11 and D-12. Why is it not a Hazard Index (HI)? And why does Appendix G use 0.1? G-47 uses 0.1, but for HI.

623-93

p. D-8 they exclude ethanol and methanol and nitrate and sodium (that is intriguing, given the extensive use of sodium coolants for the reactors), by footnote, because it is supposedly a naturally occurring, low-toxicity chemical. unclear whether it is excluded from being given a RBSL and would therefore use the LUT, or is excluded from cleanup

623-94

Table D-3 comparisons of LUT values to supposed RBSLs is not only completely wrong but also misleading. The comparison makes it appear one would be cleaning up contaminants that have no risk under the AOC, but this is only because they are using RBSLs that are a thousand times higher than the actual ones.

623-95

Footnote 5 says that where TPH is the sole constituent, "a cleanup strategy will be considered based on the findings of a soil treatability study, and the soil will be cleaned to the 5 milligrams per kilogram LUT value." This is very strange, as it suggests that TPH would not be left in place for attenuation, which seems contradictory to earlier statements about attenuation for soils that have either TPH or PAH or both, but nothing else. Perhaps this is just dishonest and they don't mean soil treatment, but rather mean to not treat it at all and just leave it there for supposed attenuation.

623-96

The bottom of p. D-11 is very puzzling. DOE only proposed revised LUT values for constituents that exceeded the AOC LUT in more than 2.5% of the soil samples and which exceeded the RBSL in at least one of those samples. The implication is that they intend not to clean up any contamination, even when found, if found in less than 2.5% of samples and when what is found is not above the RBSLs. There is also a footnote about an accepted false positive error rate, which really needs to be explained. Are they trying to claim a 5% error rate and therefore not clean up real hits?

623-97

p. D-12 mentions for selenium alone an exceedance of risk-based ecological screening level, about the only reference we have seen for the eco RBSLs; see no examination of eco RBSLs in the EIS. key

623-98

p. D-13 is extremely misleading about Hunters Point and McClellan. Page 4 of McClellan ROD says the cleanup was based on industrial/commercial – they lied saying it was for residential. and p. 5 says relies on engineered and institutional controls. Again, DOE lied, saying for unrestricted residential. almost all the decisions are to rely on restricted land use. see Table 1-2

623-99

Footnote c is false. It claims RBSL is based on suburban residential scenario established for SSFL, 24 hours a day, 350 days a year, which is absolutely not true.

buildings were not impacted by site radiological operations. While such process knowledge is a common indicator of potential contamination, as stated in response 623-85, irrespective of each building's radioactive history and past surveys DOE will conduct thorough radiation surveys and sampling for each remaining building consistent with current industry practice prior to demolition and determining the final disposition of building debris.

623-91 Appendix D, Table D-1 of this EIS lists the radiological status of those buildings for which DOE is responsible in one of three categories: those identified as "not contaminated with radioactive material" do not have a history of any radioactive contamination; those identified as "contaminated with radioactive material" have known radioactive contamination and are managed accordingly; and those identified as "not considered a radioactively contaminated structure" are buildings which have previously been decontaminated and are currently used without radiological controls. The discussion in Appendix D, Section D.1 and footnote 1 was modified to reflect that the structures that were free released were released in accordance with the DOE requirements in effect at the time. However, DOE will conduct thorough radiation surveys and sampling consistent with current industry practice prior to demolition and determining the final disposition of building debris.

DOE is required to comply with DOE Order 458.1 along with any other ARARs or agreements. DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the Conservation of Natural Resources Alternative (both scenarios) analysis in this Final EIS results in radiological risks in the 10⁻⁵ range; this would correspond to a dose much lower than 25 millirem per year.

623-92 This EIS evaluates separate sets of alternatives for soil remediation and for building demolition. The Proposed Action for building demotion is to remove all 18 buildings owned by DOE in Area IV. Please see Chapter 2, Section 2.5.2 and Figure 2-10 of this Final EIS for a discussion of the Building Removal Alternative and a diagram showing the buildings that DOE would remove. After a building or structure is removed it could no longer contribute to any contamination at SSFL. Any contamination remaining in the soils at SSFL after building removal would be cleaned up as part of DOE's soil remediation efforts.

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McClellan p 37-8 says when they analyzed residential, they included garden, which DOE doesn't and which contradicts DOE. It then analyzes industrial/commercial with restrictions, which doesn't apply to SSFL.

DOE cherry picks the McClellan remediation values from McClellan table 2-3. For example, DOE claims for SSFL a RBSL of 7290 for 1-Methylnaphthalene, but doesn't compare this to McClellan's figure of 0.73 in its Table D-5. McClellan's value is even lower than the 2.5 AOC LUT.

Even its own table shows COCs cleanup levels at McClellan far lower than DOE's RBSL (130 vs 3040, copper; mercury ten times lower, etc.) Vanadium at Hunters Point is lower than even SSFLs LUT value.

Appendix G
G.2

This section states that the EIS analysis didn't include exposures to contaminated groundwater in the assessment because of supposed low pump rates at existing wells of purportedly 0.5 to 1 gallon per hour, which it says is insufficient for household use. The EIS cites to a CDM Smith 2015 report of 241 pages; like all citations in the EIS, no page numbers are given, frustrating the ability to confirm the accuracy of the purported fact. We don't know where in the report the purported fact comes from, and indeed cannot find that assertion in the report.

The data we do find in the report, however, directly contradict the EIS assertion. Page. 8-8 indicates RD-21 pumped 173 gallons per day. RD54B did the same (p. 89 pdf). PDF p. 99 says RD33b produced 2 gallons/minute. PDF p. 140 says RD-63 produced 3.9 million gallons from periodic use between 1994-2005. PDF p. 146 says well WS-07 produced up to 4.35 million gallons annually. SSFL used site water for site supply purposes for decades.

Thus, they left out of the residential scenario any exposure to the contaminated groundwater, a major pathway.

It is asserted that Area IV and the NBZ are within a "secured perimeter fence that limits access to the soil sources." That doesn't appear to be correct; cows, for example, have been found grazing on the site of the former sodium burn pit and on other nearby land. Even if it were presently the case, there is no guarantee a fence would be there indefinitely.

G.2.1 states that rather than use the actual measurements of contamination, some of which are quite high, they instead "generate[d] soil concentrations of chemicals and radionuclides that are representative of the central tendency in the area IV and NBZ and background data sets. . . . The term 'central tendency' describes values are most typically found in the overall distribution of values (it may be represented by an average such as a median or mean) as opposed to upper-boundary values that might represent the extremes of the distribution. DOE claims that, "For purposes of analysis in this environmental impact statement (EIS), central tendency is represented by the median or mean (arithmetic)." In other words, the didn't compare the actual

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623-93 A Hazard Quotient (HQ) is the ratio of the potential exposure to a substance and the level at which no adverse effects are expected for that substance. The Hazard Index (HI) is the sum of hazard quotients for substances that affect the same target organ or organ system. Because different pollutants (air toxics) can cause similar adverse health effects, combining hazard quotients associated with different substances is often appropriate. A 0.1 HQ is used as the screening level for individual substances for inclusion in the HI calculation. A limit of 1 is used for the HI threshold, but is also used as the HQ basis for the individual substance RBSLs, as defined in Appendix D.

623-94 Due to low toxicity, RBSLs were not established for ethanol, methanol, nitrate, or sodium in the Final Standardized Risk Assessment Methodology Revision 2 Addendum, Santa Susana Field Laboratory, Ventura County, California (SRAM) (MWH 2014). While this does not impact the Cleanup to AOC LUT Values Alternative, these chemicals were not included in the RBSL lists for the Cleanup to Revised LUT Values or Conservation of Natural Resources Alternatives. Only 15 of 5,748 soil samples exceeded background for sodium. Thus sodium is not a significant contaminant for Area IV and the NBZ.

623-95 As described in the response to comment 623-8, in the Draft EIS, the appropriate risk scenario RBSLs were taken from the SRAM for the suburban resident (without garden) exposure scenario. In Appendix D, Table D-3 of this Final EIS, RBSLs for a recreational user exposure scenario (open space land use) were added to the Conservation of Natural Resources Alternative, the Open Space Scenario. This is consistent with the future use of the site as open space. Boeing entered into a land use covenant that restricts future use of the property it owns at SSFL to open space (Ventura County 2017a, 2017b); this includes Area IV and the NBZ. Neither an agricultural scenario, nor a residential scenarios that include consuming products grown in a backyard garden, are appropriate for property that would be restricted to an open space land use

623-96 The first part of the footnote comes directly from the DTSC publication of the LUT Values, June 2014 ("a cleanup strategy will be considered based on the findings of the soil treatability study"). DOE is awaiting DTSC's determination on this matter. The second part of the footnote ("and the soil will be cleaned to the 5 milligrams per kilogram LUT value") is in error and has been deleted in the Final EIS. The treatability study concluded that TPH could not be measured reliably at 5 milligrams per kilogram. The decision for the appropriate means to treat soil contaminated by TPH would be based on the efficiency and capability of various treatment options, including monitored natural attenuation, to treat TPH contaminated soil. DOE does note that the soil treatability studies determined that between 300 and 500 parts per million of TPH-like chemicals observed in Area IV soil samples have a natural origin.

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measured values of contaminants to the Lookup Table values or what they claim are Risk Based Screening levels, but instead only compared far lower values that represent the average.

But the statement that they compared the average contamination level against the average background value is completely false. G.2.2.2 states that for on-site data, they used the average spread over a wide area (as much as 110 acres). But for the background data, they didn't use the average, they used the 95th upper confidence level. In other words, they measured apples to compare to oranges. Rather than comparing the average contamination level against average background, they compared average contamination level against the upper statistical limit of background. That is how they can claim, over and over again, that the levels of contaminants at Area IV are always *below* background, something that isn't possible. "Background" is what would be there if the polluters of SSFL hadn't contaminated it. SSFL can't be cleaner than background. And this remarkable claim by DOE is based purely on improperly using averaging for the contamination, and at the same time not averaging for background.

The EIS decision to use the median for radionuclides and the mean for chemicals is seemingly arbitrary. The EIS says this was done because the radionuclide sampling was conducted in a biased rather than random manner (i.e., they chose where to sample based on their judgment it was a good place to find contamination if it were there). But much of the chemical sampling was simply co-located with the radioactive sampling, so it was equally biased; Furthermore, a significant portion of the radionuclide and co-located samples weren't biased. Averaging is bad enough, but the use of the median instead of the mean is particularly egregious, because very high readings are simply ignored.

The claim that there is very little difference between the median and mean, and between the mean and the UCL95 is unsupported and unlikely to be correct. The UCL95 is the very upper end of what you would expect a reading to be, whereas the mean is the average of all the readings, almost always a lesser value and frequently very much less.

G.2.2.1 states, as the EIS does over and over again, that it is evaluating the residential scenario; but as has been shown here, that isn't true. It is using a residential exposure one hundredths or one thousandths of the true residential exposure as required in the SRAM and by EPA, by leaving out the primary, required residential exposure pathway.

Evidence was found to suggest DOE removed the ECO RBSLs (ecological risk based screening levels) from CDM 2017. On pdf p51 of CDM 2017 (which is referenced in the DEIS), ECO RBSL was left defined in a footnote, but does not actually appear in the chart. Was it taken out of chart, but the footnote not removed? The values would have been 1000s of times lower than the purported residential RBSLs they now include. Were these values removed intentionally? The ECO RBSLs would have shown that DOE had to clean up pretty much consistent with AOC LUT values, which are close to the ECO RBSLs. Were they removed from the chart because it would force DOE to do a full cleanup, but the footnote was forgotten? DOE should disclose whether it removed the ECO RBSLs and comparisons from prior drafts.

G.3.1. DOE states that, "Because significant uncertainty accompanies any projection of future site uses, the exposure assessment was based on assumptions that were likely to overestimate

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623-97 The normal practice for identifying chemicals of concern is to use a 5 percent detection frequency as a criterion. For the identification of chemicals of concern for Area IV, DOE used 2.5 percent. The 2.5 percent is not an indicator of what would be cleaned up. Any location with an elevated concentration of any chemical will be targeted for cleanup.

623-98 In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on a suburban residential scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easements (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space. The Conservation of Natural Resources Alternative includes consideration of ecological risks in determining cleanup levels.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local offsite residents may get some portion of their food from a home garden.

623-99 Appendix D, Table D-6, of this EIS provides a comparative table of soil cleanup values for SSFL RBSLs, Hunters Point, and McClellan AFB vs. AOC LUT values. While the selected remedy at McClellan was to an industrial/commercial standard, the McClellan ROD provided evaluation of both industrial/commercial and residential cleanup levels. The values cited in Table D-6 are for unrestricted use based on a residential exposure scenario that included an ingestion of homegrown produce pathway. The Hunters Point values are also for a residential exposure scenario, including ingestion of homegrown produce.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or

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impacts to receptors in order to be protective of human health.” As they noted, Boeing’s stated intent to maintain its portion of SSFL as undeveloped open space cannot be relied upon over time, so instead “a person was assumed to build a house on site in an area where the soil contains chemical and radioactive constituents (i.e., exposure of a hypothetical future onsite resident).” However, not only is that statement misleading, but that is exactly what they didn’t do. DOE assumed the hypothetical onsite resident had no garden and assumed the house wasn’t where the main contamination was, but instead averaged their contamination with lower areas as large as 100 acres. DOE says one can’t presume institutional controls work, and therefore assume current conditions. But in the next paragraph, the DEIS says it examines for future conditions, with the assumptions of effective 100 years of institutional control, during which the radioactive materials would decay. This is unsupported and contradicted by the prior statements.

Further, neither DOE nor Boeing get to decide that cleanup levels can be weakened based on a claim that Boeing will put in place institutional controls; under EPA guidance the future use is based largely on current zoning and general plan designations, and is not allowed to be decided by a Responsible Party.

G.3.2.1.

This states that the suburban resident scenario is based on the SRAM; but the SRAM includes exposure via a backyard garden. The EIS here, as in many places throughout the document, says they are applying the suburban residential scenario, but they are not. They are using standards 1000 times weaker than the actual scenario, by excluding the primary, indirect exposure pathway. The rationale given here is completely arbitrary, contradictory, and unsupported: (1) the claim that “exposure point concentration calculations in plants are associated with significant uncertainty” and (2) “future use of the property as residential development is expected to be restricted by the landowner” (citing a Boeing letter).

EPA calculates as its default for radioactive exposures, based on extensive research about uptake in plants, exposure from the garden and requires its inclusion in the backyard garden scenario unless there is some extraordinary site-specific reason why particular vegetables or fruits can’t grow at that specific location. The SRAM similarly includes RBSLs for the suburban backyard garden, including for chemicals. And both have RBSLs or PRGs for agricultural exposure. The fact that there are uncertainties – which in fact are fairly limited, because of the extensive tracer work done regarding plant uptake – is no excuse to not consider it. Indeed, the uncertainties mean the actual risk could be far higher than assumed by the EPA PRGs and DTSC RBSLs. Leaving the indirect pathway out entirely is nonsensical; at minimum, to deal with the uncertainties, one might need to use even higher estimates of exposures from the pathways.

The result of leaving out the garden, in violation of DTSC and EPA guidance, in a hundred or thousand-fold increase in the cleanup standards, under the guise that one is still considering the suburban resident. In fact, if the correct EPA and SRAM-based values were used for the suburban resident, the cleanup levels would be orders of magnitude lower, and a cleanup very comparable to the AOC would be required. The AOC bars risk-based approaches and requires cleanup to background. But as DTSC wrote in its response to comments on the Agreement in Principle that was incorporated into the AOC, and which DOE approved, cleanup to current land

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uses of the site. A garden pathway was not used in the RBSLs for onsite receptors in this EIS as residential development with a garden is not a future land use for the SSFL property.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLs based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing’s conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Residential Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

623-100 See the response to comment 623-99. It was DTSC that identified McClellan and Hunter’s Point as being comparable cleanup sites to SSFL. The differences between the values used at McClellan and the SSFL RBSL values that DOE used for this EIS are attributable to the garden pathway not being included in the SSFL RBSL values. A footnote to this effect has been added to Table D-6. The SSFL RBSL values come directly from the SRAM values for a Suburban Resident. The SRAM separated the Suburban Resident Garden Pathway RBSLs from the RBSLs for the direct pathways due to large uncertainty in the plant uptake factors.

623-101 The Draft EIS analysis didn’t include exposures to contaminated groundwater because there is not a sustainable water supply in Area IV and NBZ sufficient for prolonged household use, particularly by multiple households. Although it is recognized that some wells can produce groundwater in some years, continued pumping will eventually lower the water table to where production no longer is possible. Water supply well WS-07 is located at the boundary of Areas IV and III. The 700-ft deep well was part of a network of 17 water supply wells at SSFL, and the only supply well located in Area IV. The lack of other water supply wells in Area IV is an indication that the bedrock aquifer in Area IV cannot sustain a continuous water supply. Water production from the

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use designations would result in cleanup comparable to the AOC. A comparison of the correct RBSLs for suburban residential, using EPA and DTSC's approved suburban residential inputs, which include the garden, against the LUT values and the measured concentrations onsite, shows that a cleanup very similar to the AOC requirements would occur even if a true "risk-based" cleanup were employed, using the real suburban residential risk based standards. The DOE is quietly removing the key component of those standards, the child eating an apple from a backyard tree, or lettuce or tomatoes growing in the contaminated soil.

The second rationale provided by DOE for excluding the required garden component of the suburban residential standard is equally flimsy. DOE argues that future land use is "expected" to be restricted by Boeing. But here DOE has just fallen all over itself. Just a few paragraphs earlier it has admitted that such an expectation cannot be relied upon and therefore DOE will presume there is no restriction against residential use. How it can presume residential use, because one cannot rely on Boeing's supposed intent to restrict future use, but then presume we can trust the resident will be barred from having a fruit tree or tomato plant, is impossible to reconcile. DTSC has informed Boeing that the garden must be included in the residential scenario. DOE is violating all this, as its key way of trying to walk away from the obligation to clean up its contamination.

And it is critical to remember that a main purpose of analyzing whether it is safe for someone to live on the site is as a way of determining the degree of risk for people living nearby. If it is safe for SSFL to be used for unrestricted use, then people offsite are safe as well.

But if you aren't assessing for unrestricted use onsite, the contamination migration means there is no way of demonstrating safety for people living nearby, with gardens, or people consuming milk or beef or other farm products grown close to the site.

Here DOE concedes the SRAM includes the suburban residential garden scenario, and that DOE didn't. Elsewhere in the EIS DOE however claims it used the SRAM suburban residential exposure assumptions. Not disclosing there are key components of the scenario omitted is misleading and unethical.

G.3.2.2.

Here DOE goes so far as to claim that the suburban residential RBSLs "were based on a standard set of exposure pathways." This is false. As mentioned before, the standard, default exposure pathways for suburban residential are dominated by the backyard garden, which DOE leaves out, producing RBSLs thousands of times higher than would be the case if they indeed based them on the standard exposure pathways.

G.4.2 This claims the radioactive RBSLs came from the EPA PRGs, "consistent with the SRAM exposure scenarios" but both parts of this claim are false. The EPA PRGs for suburban residential exposure are hundreds and thousands of times lower than the values DOE used, and the SRAM exposure scenarios include the garden, which DOE quietly excluded.

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SSFL water-supply wells peaked between 1957 and 1964. However, sustained pumping through this time resulted in lowering the groundwater level as much as 500 feet in the most heavily pumped area (north-central SSFL). Water levels in WS-07 were lowered 200 feet during the 4 years that it was pumping 8 gallons per minute. Water production was discontinued in all but 5 wells by the early 1960s due to insufficient yield (MWH 2009). In 1964 SSFL began importing water from the Calleguas Water District. WS-07 is currently proposed for abandonment as it is not a reliable source of water.

Sustained pumping of the wells cited in the comment would similarly be expected to draw water levels down in Area IV to the point that a reliable supply would not be available. In addition RD-21 and RD-54B produced less than the projected needs of a single 3-person household (about 540 gallons per day based on the U.S. Geological Survey estimation that the average water use in California is 181 gallons per day).

623-102 Please see the response to comment 623-99. With regards to the fence the commenter is correct and the reference to a fence has been removed. The conservation easements, prohibiting residential, agricultural, or commercial development or uses of the site and North American Land Trust will monitor and enforce the easement.

623-103 DOE agreed in the 2010 AOC to cleanup at SSFL on a point-by-point basis based on an LUT value. However, when a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989) prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and only suggests the use of a maximum value as a screening tool. Therefore, DOE has appropriately used a UCL95 (or a median when warranted) as the exposure point concentration for calculating risk and toxicity impacts. The commenter has confused the UCL95, which stands for the upper 95 percent confidence limit on the arithmetic mean of the population, with a UTL, which is the upper tolerance limit on the distribution of the population based on the distribution of the sample values. For example, a UTL95/95 is an individual concentration that bounds at least 95 percent of the population distribution with 95 percent confidence. The UCL95 bounds the arithmetic mean of a population with 95 percent confidence. For a large number of samples the UCL95 is nearly always smaller than the UTL95/95 and much closer to the mean (the larger the sample the smaller the uncertainty). The statement that there is very little difference between the median and mean, and between the mean and the UCL95 was based on comparison of actual calculated values for radionuclides. The use of the median was considered by DOE to be more statistically robust due to the biased nature of the sampling. Additional exposure point concentration data has been developed since publication of the draft EIS for chemicals

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DOE chose to evaluate the external exposure pathway for radionuclides in soil via its own RESRAD code rather than the EPA PRG calculator, even though external exposure from radionuclides in soil is part of the EPA PRGs. EPA guidance generally bars the use of the generally less protective RESRAD and requires the use of the PRGs, and under the 1995 Joint Policy, DOE is required to follow the EPA guidance. One is not supposed to use dose but rather morbidity risk (cancer incidence). If there is some genuine reason to not do this (and there isn't), one is supposed to use EPA's Dose Conversion Calculator, not RESRAD.

G.4.3.

p. G-17, future conditions are defined as institutional controls, working for 100 years and then estimating risks after 100 years of decay – this is inappropriate.

p. G-21 estimates onsite risks as 1.6×10^{-4} , which they claim is largely background; but under EPA rules, if total risk with background is high, you clean up to background, so the total risk is as close to the risk range as possible.

Table G-42, p G-93 is missing numerous values for the last two columns for many of the radionuclides detected by EPA as above Background Threshold Values, which would be required to be cleaned up under the AOC. DOE can't have it both ways – claiming to clean up to residential standards, but then in fact not doing so.

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is now available and the appropriate UCL95 or median values have been used in this Final EIS. It should be noted that not only does the biased sampling tend to bias the site average high, but the fact that the site results were truncated on the lower end at the detection limit for chemicals and at the FAL for radionuclides results in an additional high bias for the site data. This bias has been removed in this Final EIS by use of all the data, including that developed since the publication of the draft EIS, in performing statistical calculations.

623-104 The statement that the SRAM and EPA require a “true residential exposure” is incorrect. Both the SRAM and EPA allow for exposure assessments based on a most likely future scenario. Because Suburban Resident with garden is not a likely future scenario. It is not used here. Please see the response to comment 623-99.

623-105 DOE performed two types of risk assessments. For human health DOE employed the standard risk assessment process used by EPA nationwide and at DTSC sites in California. The process involved establishing exposure areas, analyzing the data within the exposure area, and using the analyzed data to predict the risk to human health. This is what is described in CDM Smith 2018d. The process for ecological receptors differed from the human health analysis. Because some ecological receptors will only occupy a portion of a 10,000 square meter plot, DOE reviewed the data on a point-by-point basis to see where elevated concentrations of contaminants exist, and compared the results with their respective RBSLs. Locations exceeding ecological RBSLs were targeted for cleanup. The ecological risk process is described further in Section 4.5 of this Final EIS, and in the Biological Assessment.

623-106 Please see the response to comments 623-99 and 623-103.

623-107 Please see the response to comment 623-99. The uncertainties in the plant uptake factors have already been taken into consideration in the RBSL and EPA Preliminary Remediation Goal values making them biased high to be conservative. In addition the SRAM dictates fruit and vegetable consumption rates that are biased high and are higher than those recommended by the EPA and included in EPA's Regional Screening Levels and Preliminary Remediation Goal guidance. These conservatisms result in the high risk values for background for this pathway calculated using the SRAM RBSLs for the garden pathway and why the SRAM suggests the risks for this pathway be evaluated separately from the direct pathway risks.

623-108 Please see Section 2.7, “Offsite Impacts,” of this CRD for a discussion and DOE's response to concerns about offsite impacts.

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623-109 Please see the response to comment 623-99.

623-110 Please see the response to comment 623-99 for a discussion of applicable pathways. The 1995 DOE-EPA Joint Policy creates a framework for the conduct of decommissioning of DOE facilities and provides guidance to EPA Regions and DOE Operations Offices on the use of CERCLA response authority to decommission such facilities. However, it only ensures compliance with CERCLA requirements for remedy selection at National Priorities List facilities. Since SSFL is not on the National Priorities List, CERCLA requirements for the selection of a remedy do not apply to it. However, note that this EIS does include an alternative/scenario consistent with the approach and process used by EPA in CERCLA cleanups. The radiological RBSLs used as risk slope factors for the No Action Alternative were obtained from the EPA online source for Preliminary Remediation Goals (EPA 2015) and included the direct external exposure from radionuclides in soil. The risk from the external exposure pathway due to submergence in airborne radioactive material from suspended soil for radionuclides was evaluated using default RESRAD parameters because the external dose pathway from submergence in airborne radioactive material from soil was not addressed in the SRAM RBSLs or in the EPA Preliminary Remediation Goal calculator. EPA does not bar the use of RESRAD. It is only stated in the Radiation Risk Assessment at CERCLA Sites: Q & A document that the EPA Preliminary Remediation Goal calculators are “recommended by EPA for Superfund remedial radiation risk assessments.” The RESRAD code calculates both radiological dose and risk, whereas the Preliminary Remediation Goal calculator calculates only risk. For dose calculations, the EPA uses another tool—the Dose Compliance Concentration Calculator (ANL 2015). A document that compares RESRAD with the EPA CERCLA tools, Preliminary Remediation Goal and Dose Compliance Concentration calculators, makes the following observations: “Unlike RESRAD, which uses the same models and parameters for both dose and risk calculations, the EPA uses two different Calculators—Dose Compliance Concentration and Preliminary Remediation Goal—which use different models and parameters to calculate dose and risk. The Preliminary Remediation Goal Calculator does not handle radiological decay and ingrowth properly. The ingrowth of longer-lived progenies is ignored, and some short-lived progenies are not accounted for or not accurately accounted for. Furthermore, the Preliminary Remediation Goal Calculator is not designed for realistic or site-specific analysis because many models (e.g., fish, produce, and special radionuclides) and parameters (e.g., Kds, MLF) used are not realistic” (ANL/EVS/TM--15-1).

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623-111 Please see the response to comments 623-99 and 623-102.

623-112 The information presented in the draft EIS implies that the site risk from chemicals is not significantly different from the background risk. However, the site risk was calculated without elimination of contaminants of potential concern that are in the background range before calculating the risk. This has been revised in this Final EIS to obtain a different comparison to background based only on the site COCs in background. As shown in Chapter 4, Table 4-63, the No Action Alternative residential risk from exposure to chemical contaminants of concern at background levels is 5.6×10^{-7} and the onsite residential risk from onsite chemicals ranges from 2×10^{-6} to 3×10^{-4} .

EPA rules do not dictate cleanup to background when the background risk is high. EPA CERCLA background guidance (EPA 2002) states “Where background concentrations are high relative to the concentrations of released hazardous substances, pollutants, and contaminants, a comparison of site and background concentrations may help risk managers make decisions concerning appropriate remedial actions. The contribution of background concentrations to risks associated with CERCLA releases may be important for refining specific cleanup levels for contaminants of concern that warrant remedial action.” Also, please see the response to comment 623-110.

623-113 The last two columns of Table G-42 contain the values calculated by RESRAD. As noted in the footnote, the risk from the radionuclides that are missing in the columns is evaluated and included the risk for their decay parents because they are in activity equilibrium with their parents. Therefore, separate RBSLs for them are not available from RESRAD and listing them in the table would not be appropriate.

Also see the response to comment 623-99 for a discussion of applicable pathways.

Commenter No. 624: Mark B. Osokow,
San Fernando Valley Audubon Society



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"For nature education and the conservation of wildlife"

July 15, 2017

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Re: San Fernando Valley Audubon Society Supplemental Comments on the Draft Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory (Draft SSFL Area IV EIS) (DOE/EIS-0402)

Dear Ms. Jennings:

INTRODUCTION AND BACKGROUND

The purpose of this letter is to provide supplemental comments on behalf of the San Fernando Valley Audubon Society (SFVAS) regarding the U. S. Department of Energy Draft Environmental Impact Statement (DEIS) on the Remediation of Santa Susana Field Laboratory (SSFL) Area IV and the Northern Buffer Zone. SFVAS previously submitted comments regarding the DEIS on April 13, 2017. However, new information has become available since that time that may alter the DOE's decision on what remediation standard is to be enforced regarding the remediation of soil and surficial media currently addressed in the Administrative Order on Consent for Remedial Action (AOC). SFVAS believes the new information is crucial to determining how DOE should proceed.

NEW INFORMATION

During the month of May, 2017, SFVAS received notice that The Boeing Company, which owns Area IV and the Northern Buffer Zone, entered into a Grant Deed of Conservation Easement and Agreement (the Easement), with the North American Land Trust for the administration of an easement encompassing all of the property owned by the company at SSFL. The Easement stipulates, among other things, that the property is to be maintained in perpetuity as open space for the benefit of wildlife and to further other conservation values (Easement, Part 1), and that no commercial, industrial, residential, or agricultural activities are to be located there (Easement, Part 4). A publicly accessible web page <http://www.boeing.com/features/2017/04/santa-susana-open-space-habitat-04-17.page>

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624-1 Your comments were considered in preparing this *Final SSFL Area IV EIS*.

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624-2 DOE acknowledges SFVAS' support for remediation of the Boeing property to an open space standard consistent with plans for its future use as mandated by two Grant Deeds of Conservation Easement and Agreements (conservation easements) the Boeing Company entered into with Ventura County (Ventura County 2017a, 2017b). Please refer to Section 2.1, "Preference for Cleanup," of this CRD for further discussion of this topic.

Commenter No. 624 (cont'd): Mark B. Osokow,
San Fernando Valley Audubon Society

generally describes the terms of the Easement.

SFVAS RESPONSE

In light of the new information, SFVAS re-considered its previous position supporting remediation of soil and surficial media covered by the AOC for Area 4 and the Northern Buffer Zone to a suburban residential standard, as the original comments state. As a result, the SFVAS Board of Directors passed a resolution essentially stating that SFVAS supports remediation of the Boeing property to an open space standard consistent with plans for its future use as mandated by the Easement. A copy of the resolution is appended to this letter and is self-explanatory. This letter, with appendix, is to be considered as an integral part of the SFVAS comments on the DOE remediation undertaking.

CONCLUSION

Based on the foregoing, SFVAS urges DOE to adopt a remediation standard consistent with the planned ultimate use of SSFL Area 4 and the Northern Buffer Zone as open space wildlife habitat, while preserving or enhancing other conservation values, as described in the Easement.

Sincerely,

Mark B. Osokow
San Fernando Valley Audubon Society,
Member of the Board of Directors,
Chair, San Fernando Valley Bird Observatory
Special Assistant for the Santa Susana Field Laboratory
Representative to City of Los Angeles OneWaterLA

REFERENCES

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The Boeing Company. 2017. Boeing secures historic Santa Susana site as open space habitat. Available on-line at <http://www.boeing.com/features/2017/04/santa-susana-open-space-habitat-04-17.page>

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In this Final EIS, DOE has retained the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative, but evaluates two scenarios under the Conservation of Natural Resources Alternative. One scenario is based on a future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., evaluates a recreational user as the onsite receptor). The other scenario is the scenario evaluated in the Draft EIS, that is, a suburban residential scenario without a garden pathway. This scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space. Ecological risk is also considered in determining cleanup levels.

Commenter No. 624 (cont'd): Mark B. Osokow,
San Fernando Valley Audubon Society



San Fernando Valley Audubon Society
Incorporated as California Audubon Society 1913
P.O. Box 7769 Van Nuys, CA 91409-7769

"For nature education and the conservation of wildlife"

ADDENDUM

RELEASE TO PRESS AND THE PUBLIC

June 25, 2017

RESOLUTION TO SUPPORT REMEDIATION OF SANTA SUSANA FIELD
LABORATORY TO OPEN SPACE STANDARD

WHEREAS, based on information available at the time, in March, 2015 the San Fernando Audubon Society Board of Directors (the Board) unanimously passed a Resolution supporting remediation of the Santa Susana Field Laboratory (SSFL) a to risk-based suburban residential standard (text of resolution attached below); and

WHEREAS The Boeing Company (Boeing) owns approximately 2,400 acres of the 2,850 acre site; and

WHEREAS, at the time the resolution was promulgated, the Board was aware that Boeing had previously pledged publicly on numerous occasions to preserve their property at SSFL as open space; and

WHEREAS Boeing recently entered into an agreement with the North American Land Trust (the Trust) to have the Trust administer and enforce a Conservation Easement (the Easement) governing future uses of the Boeing-owned portions of the site as open space; and

WHEREAS the Easement is a legally enforceable document; and

WHEREAS the Easement assures that future use of the property will be limited to that of open space intended to conserve natural, historical, and cultural resources; and

WHEREAS the Easement prohibits commercial, residential, and agricultural use of the site in perpetuity; therefore, it is

RESOLVED that the San Fernando Valley Audubon Society hereby supports remediation of the SSFL to an open space standard consistent with future use of the site; and it is further hereby

RESOLVED that the previous resolution supporting remediation of SSFL to the suburban residential standard is hereby updated and superseded.

PASSED UNANIMOUSLY BY SAN FERNANDO VALLEY AUDUBON SOCIETY
BOARD OF DIRECTORS ON JUNE 26, 2017.

624-2
cont'd

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**Commenter No. 624 (cont'd): Mark B. Osokow,
San Fernando Valley Audubon Society**

ATTACHMENT

AD HOC SHORT TITLE (by Mark Osokow): Resolution supporting a clean-up of Santa Susana Field Laboratory to risk-based suburban residential standard.

"SFVAS supports remediation of contamination at SSFL only to the standard for suburban residential areas. SFVAS opposes the unprecedented proposal to require remediation to background level, which would devastate outstanding wildlife habitat, extremely significant historical structures from the USA Space Age, and create significant health and safety impacts on communities near routes that trucks hauling soils offsite would pass. Background remediation would destroy Native American cultural sites, which remediation to the suburban residential standard would not."

PASSED UNANIMOUSLY BY SAN FERNANDO VALLEY AUDUBON SOCIETY
BOARD OF DIRECTORS ON MARCH 26, 2015.

Response side of this page intentionally left blank.

Commenter No. 625: Gary Kozlowski

Just now saw this website(aug.22,2017). My wife died from cancer in 1995. We moved to 6621 charing st. Simi valley ca. 93063 in 1989. She was diagnosed with lung cancer in 1992. We lived withen 2 miles of the Santa Susana site then owned and operated by Rocketdyne. My wife and mother of two died in 1995 from the cancer that came from nowhere. She never drank alcohol nor smoked cigarett. I can only believe that living where we did contributed to her cancer. It is very sad to see how little caring goes into the health and well being of people verses the progress the private companies that contract with the government that is supposed to protect and serve its citizens. That move to Santa Susana cost her life and destroyed mine and my sons. Shame on all those responsible for polluting that part of Simi Valley and West Hills. The people who made these outrageous decisions to pollute then cover up the mess need to be shamed for their actions and the government cover up speaks volumes to the citizens moving forward. This should never have happened in the way it did.

Regards to all the other people who suffered like we did. I will never forget this even though I have forgiven those pitiful souls who made all those bad decisions.

625-1

625-1 Your comments were considered in preparing this Final SSFL Area IV EIS. As described in Section 2.7, “Offsite Impacts” of this CRD, there is no evidence of major amounts of contamination leaving SSFL. The commenter is referred to EPA’s soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC’s review of the data (included as part of DTSC’s broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an offsite investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

625-2**625-1
cont’d**

Please refer to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD, for a discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes several public health studies for the SSFL, in addition to a number of health studies for workers at SSFL as well as cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

625-2

DOE conducted historic operations under the laws and regulations applicable at the time. There was no pollution cover up by DOE. In addition, DOE has performed much cleanup in Area IV. As described in Section 2.10, “Public Perceptions about Waste and Contamination in Area IV” of this CRD, over the operation history of the site, there have been 272 numbered structures in Area IV. As the missions for the buildings ended, they were decontaminated and removed. Today only 22 structures, 18 DOE-owned and 4 Boeing-owned, remain. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). DOE has also removed much of the contamination within the remaining buildings, soil, and bedrock that resulted from nuclear research activities. Therefore, SSFL Area IV and the NBZ do not contain large amounts of toxic contamination.

**Commenter No. 626: Steven L. Shestag,
Director, Environment, Health & Safety, Boeing**



The Boeing Company
Santa Susana Field Laboratory
5800 Woolsey Canyon Road
Canoga Park, CA 91304-1148

VIA OVERNIGHT AND ELECTRONIC MAIL

June 6, 2017
In reply, refer to SHEA-115696

Ms. Stephanie Jennings
NEPA Document Manager
SSFL Area IV EIS
U.S. Department of Energy
4100 Guardian Street, Suite 160
Simi Valley, CA 93063

Dear Ms. Jennings:

On April 12, 2017, The Boeing Company ("Boeing") submitted comments on the Draft Environmental Impact Statement ("Draft EIS") for the Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory ("SSFL") prepared by the U.S. Department of Energy ("DOE") pursuant to the National Environmental Policy Act ("NEPA"). The purpose of this letter is to provide DOE with additional information for consideration relating to events that have occurred since the close of the comment period on the Draft EIS, so that the information can be taken into account by DOE in preparation of the EIS. Boeing understands that the comment period on the Draft EIS has closed, but respectfully requests that DOE include this additional information in the record and consider these new circumstances as it continues to prepare the EIS.

Recording of Conservation Easement over Area IV and the Northern Buffer Zone

In our April 12 comments, we informed DOE of Boeing's plans to permanently preserve the property it owns at SSFL, including Area IV and the Northern Buffer Zone, as open space. As you are aware, on April 24, 2017, Boeing recorded a Conservation Easement in the Official Records of Ventura County in favor of North American Land Trust, covering nearly 2,400 acres of the SSFL, including Area IV and the Northern Buffer Zone ("the Property"). A copy of the Conservation Easement is enclosed for the record.

The Conservation Easement expressly prohibits the Property from ever being developed or used for residential, commercial, industrial or agricultural purposes. The Conservation Easement is perpetual in duration, meaning these uses and developments are and forever will be prohibited on the Property. The Conservation Easement unequivocally ensures, as a matter of law, that the Property will be preserved as open space habitat, protecting the unique and valuable natural and cultural resources that are present. On April 27, 2017, we notified DTSC that, as a matter of law, the State must recognize the restrictions that the Conservation Easement places on future use of the Property, and that the only legally feasible and reasonably foreseeable land use scenario for the Property is recreational. Boeing remains committed to completing a cleanup that is fully protective of human health and environment, consistent with the land's

626-1

626-1 Your comments have been considered in preparing the *Final SSFL Area IV EIS*.

626-2 DOE is aware of the two Grant Deeds of Conservation Easement and Agreements (conservation easements) the Boeing Company entered into with Ventura County (Ventura County 2017a, 2017b) and has updated the final EIS analysis to include consideration of a future open space land use for all Boeing property at SSFL.

In this Final EIS, DOE has retained the Cleanup to Revised LUT Values Alternative and the Conservation of Natural Resources Alternative, but evaluates two options under the Conservation of Natural Resources Alternative. One option is based on a future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., evaluates a recreational user as the onsite receptor). The other option is the scenario evaluated in the Draft EIS, that is, a suburban residential scenario without a garden pathway. This scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space. Ecological risk is also considered in determining cleanup levels.

626-2

**Commenter No. 626 (cont'd) : Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**



June 6, 2017
SHEA-115696
Page 2

future use as open space habitat; our cleanup will be safe for people who use SSFL for recreational purposes, the wildlife that live at there, and the neighboring communities.

Inclusion of a Risk Based Alternative Based on Recreational Land Use

With the recording of the Conservation Easement, there is no question that recreation is the only legally permissible future use of Area IV and the Northern Buffer Zone. DOE's stated reason in its Draft EIS for not examining an alternative based on a recreational user scenario was to be "consistent with Boeing's basis for analysis." As noted above, Boeing's proposed remediation activities will ensure protection of recreational and ecological receptors, consistent with the land's future use as open space habitat. On May 24, 2017, we provided DTSC with updated information on Boeing's proposed project activities for inclusion in the Project Description for the Program Environmental Impact Report ("Program EIR") being prepared by DTSC for remediation activities at the SSFL. We notified DTSC that following the recording of the Conservation Easement, in order to comply with CEQA, Boeing's proposed soil remediation activities should not be based on residential land use scenarios, and that information previously provided to DTSC regarding such soil remediation activities should not be used in the Program EIR as part of the Project Description or for any other purpose.

Not including an alternative that evaluates the only legally permissible future land use would appear to be inconsistent with both U.S. Environmental Protection Agency (EPA) and DTSC guidance for remediation activities based on risks to human health and the environment. Thus, Boeing again urges DOE to include a risk-based alternative for the remediation of Area IV and the Northern Buffer Zone that considers protection of the recreational user and ecological receptors.

Preservation and Protection of the Property's Conservation Values

The Conservation Easement identifies as its primary purpose the preservation and protection of the six "Conservation Values" that the Property possesses. Conservation Easement, Section II.1. These Conservation Values consist of and are prioritized as follows:

- (1) Habitat Values, as the Property provides high quality natural, restored or enhanced habitat for a large number of species, including rare, threatened and endangered species under State and federal law;
- (2) Open Space Values, as the Property links vital habitat corridors described as critical connectivity habitat;
- (3) Cultural Resources Values, as the Property is important to the Chumash, Tatavian and Tongva Tribes;
- (4) Scenic Values, given the unique natural scenic beauty of the Property, with significant, virtually untouched areas, and its visibility from nearby parks, reserves and natural areas and various developments;
- (5) Historic Resources Values, reflecting the role of the Property in supporting numerous defense and space programs; and
- (6) Education, Scientific, and Recreation Values, in light of the opportunities the Property has provided to various organizations and members of the public to research and observe of sensitive ecological habitats and wildlife populations.

626-2
cont'd

626-3

626-2
cont'd

626-4

626-3 Thank you for your comment. It has been included in the Administrative Record for the SSFL Area IV EIS. Although the comment/statement is not on the scope or content of this SSFL Area IV EIS, note that as indicated in response to comment 146-1, the Final EIS includes an alternative that includes an option based on a future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement. DTSC issued the *Draft Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* was issued by DTSC in September 2017 (DTSC 2017a).

626-4 The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. This EIS evaluates impacts on biological resources (including habitat and habitat corridors, and threatened and endangered species), cultural resources (including Native American and historic resources), and land resources (including aesthetics and visual quality, and recreation). All of the cleanup alternatives evaluated in this EIS would remediate Area IV and the NBZ so these areas would be safe for future use as open space.

If implemented, regardless of the cleanup alternative, DOE would use measures that would protect and minimize impacts to biological and cultural resources, including the use of exemption areas. The purpose of exemption areas is to minimize impacts to important biological and cultural resources. Therefore, if there were no chemicals or radioactive constituents within these areas that posed a risk to human health or the environment, the areas would not be disturbed. However, if levels of constituents in these areas pose a risk to human health and the environment, as determined using risk-based screening levels (RBSLs), DOE would remove the contamination through carefully planned, focused removals that would minimize impacts.

Please refer to Section 2.4 "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of the process followed for employing exemptions.

The process and controls that will be used to minimize impacts to federally protected threatened and endangered species are described in the U.S. Fish and Wildlife Biological Opinion (see Appendix J).

Likewise the process and controls that will be used to minimize impacts to cultural resources will be described in the Section 106-compliant Programmatic Agreement. (This document is being prepared in conjunction with the SHPO and involved Native American groups.)

Commenter No. 626 (cont'd) : Steven L. Shestak,
Director, Environment, Health & Safety, Boeing



June 6, 2017
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Page 3

Conservation Easement, Section I.C.

The Conservation Easement also provides that the remediation activities conducted on the Property, including activities performed by DOE, are important to the advancement and protection of, and therefore consistent with, these Conservation Values. It further provides that such remediation activities can be performed in a manner that will further the long-term preservation of the Conservation Values at the Property. Conservation Easement, Section II.1. Thus, DOE should consider which of, and how, the cleanup alternatives that are evaluated in the EIS will assure that these Conservation Values are protected and preserved to the fullest extent. The Conservation Values set forth in the Conservation Easement are especially important with regard to the protection of biological, cultural and land resources and the discussion of aesthetics, visual quality and recreation.

Cumulative Impacts Analysis

Boeing's April 12 comments included an attachment that provided data regarding Boeing's estimates for its remediation project to support DOE's cumulative impacts analysis. With the Conservation Easement restricting the future use of the Property as protected open space habitat, we have revised the information provided in this attachment. Enclosed is revised Attachment C, Revised Data for Cumulative Impacts Analysis of SSFL Remediation for DOE EIS – Boeing Remediation Project Estimates, May 2017. This document should be utilized in considering Boeing's comments on the EIS instead of the Attachment C previously appended to Boeing's April 12 comments.

Again, Boeing appreciates the opportunity to submit these additional comments to DOE. Should you have any questions regarding our comments or wish to discuss them, please contact Art Lenox of my staff at (818) 466-8795.

Sincerely,

Steven L. Shestak

Steven L. Shestak
Director – Environment
Environment, Health & Safety

Enclosures: Grant Deed of Conservation Easement and Agreement
Attachment C – Revised Data for Cumulative Impacts Analysis of SSFL Remediation for DOE
EIS—Boeing Remediation Project Estimates, May 2017

cc: John Jones, DOE (w/encl. via e-mail)

626-4
cont'd

626-5

626-5 The soils volumes and other cumulative impacts information presented in Chapter 5, Table 5-1, of the Draft EIS were up-to-date at the time the Draft EIS was prepared (see references to NASA 2015b and Boeing 2015d). Since the Draft EIS was released in January 2017, revised information has become available. Therefore, this Final EIS includes updated NASA and Boeing values (including information provided in Attachment C to this comment letter) in Table 5-1 to reflect the latest information.

Commenter No. 626 (cont'd) : Steven L. Shestag,
Director, Environment, Health & Safety, Boeing

This comment document included as an attachment, the "Grant Deed of Conservation Easement and Agreement" between The Boeing Company and North American Land Trust. It is not considered a comment on the EIS so is not presented here to conserve space. A copy is included the Administrative Record.

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Commenter No. 626 (cont'd) : Steven L. Shestak,
Director, Environment, Health & Safety, Boeing

Attachment C - revised
Data for Cumulative Impacts Analysis of SSFL Remediation for DOE EIS –
Boeing Remediation Project Estimates, May 2017

	Boeing
Land disturbed (acres)	
- Area Disturbed for Soil Removal	17
- Area Disturbed for Building Removal	3
Employment (persons)	
- Onsite Employees	100
- Truck Drivers - Truck drivers for occasional deliveries or pickups are not included in long-term employment	Assume 16 to 32 truck drivers when 96 truck trips are split between NASA, Boeing and DOE.
Resources used	
- Backfill for Soil Excavation (cubic yards)	50,000 (a)
- Backfill for Building and Bedrock Removal (cubic yards)	1,300
Resources used	
- Water (gallons/day)	20,000 (c)
Waste generated (cubic yards)	
- Soil Excavation	150,000 (b)
- Building Removal	112,000 (d)
- Bedrock Excavation	None expected
Truck trips	
- Soil Disposal	9,800 (e)
- Bedrock Disposal	None expected
- Backfill Delivery	3,300 (f)
- Demolition Debris	1,000 (g)
- Other deliveries	400
Totals	14,500

Boeing = The Boeing Company;

- (a) Estimates assume that approximately 33% of excavated soil volume will be needed as backfill obtained from other sources to supplement surrounding soils used as backfill to restore the soil remediation area.
- (b) Estimated in situ soil excavation volume for cleanup to protect future recreational and ecological receptors for DOE EIS planning.
- (c) Water use estimated based on generalized data regarding water use for prior soil removal activities at SSFL and comparable information for other MWH/Stantec soil remediation projects.
- (d) Building debris cubic yard volume based on 1.5 cy per ton to maintain consistency with soil volume estimates. Actual debris volume will be dependent on type of material.
- (e) Estimates assume 1.5 cy per ton of soil, and 23 tons per truck average.
- (f) Trucking estimates for backfill delivery provided for conservative planning estimates. To minimize truck trips, Boeing plans to use the trucks that bring clean backfill to the site from offsite sources for subsequent off-haul of contaminated soil. Also, Boeing may use onsite sources of backfill. In both of these cases, the truck trips estimated here would be minimized or eliminated.
- (g) Trucking estimate for building debris removal based on an average truck volume of 17 cy based on prior Boeing demolition projects.

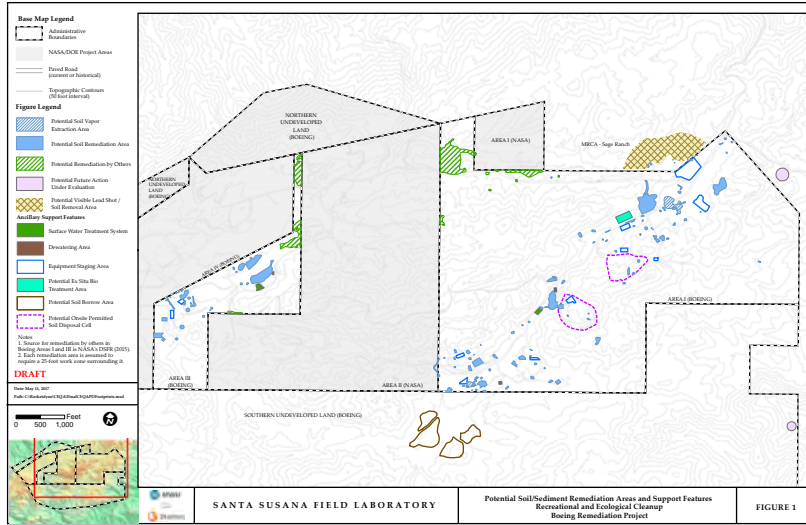
Attachments:

Figure 1 - Potential Soil/Sediment Remediation Areas and Support Features, Recreational and Ecological Cleanup, Boeing Remediation Project

Figure 2 – Boeing-Owned Former Radiological Buildings in Area IV for Demolition

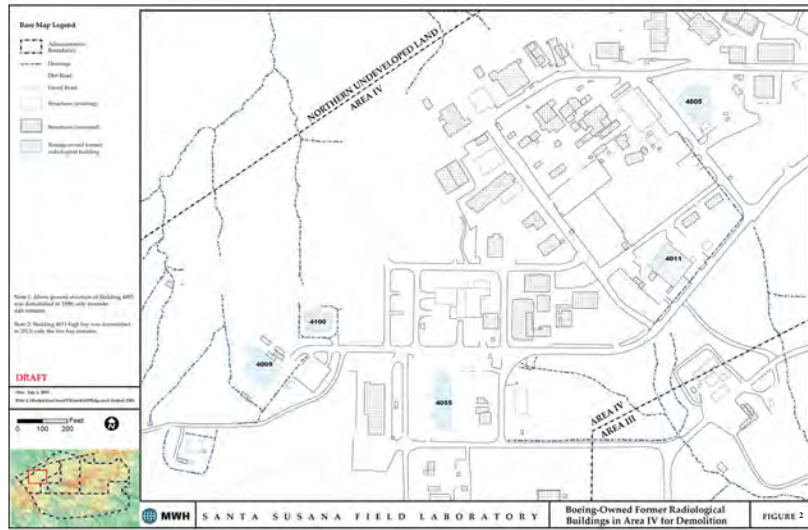
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**Commenter No. 626 (cont'd) : Steven L. Shestak,
Director, Environment, Health & Safety, Boeing**



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Commenter No. 626 (cont'd) : Steven L. Shestak,
Director, Environment, Health & Safety, Boeing



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Campaign A

U.S. Department of Energy NEPA Document Manager, SSFL Area IV EIS
Stephanie Jennings
stephanie.jennings@emcbc.doe.gov

Dear Ms. Jennings:

I am outraged by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

DOE's DEIS makes it abundantly clear that DOE wants to break out of its commitment to clean up all of its contamination at SSFL. Instead, DOE proposes leaving between 39% and 99% of the dangerous radionuclides and toxic chemicals on site, not cleaned up, where they will continue to migrate and put nearby communities at risk. That is unacceptable!

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation, all of which are prohibited under the AOC. Any "leave in place" cleanup methods, including natural attenuation and "no action" and should not be considered.

DOE also fails to acknowledge that the AOC is a legally binding agreement with the DTSC, and DTSC as the regulator makes the cleanup decisions, not DOE. The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the state toxics agency is the regulator who decides cleanup requirements for the toxic chemicals. That isn't within the power of the polluter, DOE. DOE should withdraw the EIS, as it violates cleanup commitments and DOE has no legal authority to decide the cleanup in the first place.

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby- including myself and young family- and future visitors to the site will be at increased risk of cancer and illnesses related to exposure to SSFL contaminants. I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

A-1

A-2

A-3

A-1
cont'd

A-1 DOE has not announced that it intends to break the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). In response to public input since the 2010 AOC was signed, this EIS also analyzed alternatives that determine cleanup levels by considering risk to human health and the protection of natural resources. This latter approach is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

As discussed in Section 2.2 of this CRD, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

With respect to your comment about natural attenuation, as discussed in Section 2.2, of this CRD, onsite treatment is provided for in the 2010 AOC. DOE notes that the 620,000 cubic yards of soil for which monitored natural attenuation is proposed contain very low concentrations of hydrocarbons (TPH) that do not pose a threat to human health. See Chapter 2, Section 2.3.2 of this Final EIS for additional information.

A-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant

Campaign A (cont'd)

to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

A-3 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS

Campaign A (cont'd)

evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS. Exceeding an AOC LUT value does not necessarily mean that the constituent is present at dangerous levels. For further discussion of this topic, refer to Section 2.5, "Toxicity of Soil Contaminants" of this CRD.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Campaign A (cont'd)

Individuals submitting this campaign

Anonymous
John Ackerman
Tracie Acuna
Alicia Adams
Ken Adams
Linda Adams
Thomas Adams
Michael Adler
Nicole Adler
Sachin Agrahar
Gladys Aguilar
Sarah Aguirre
Denise Aiani
Sharlene Aiken
Thomas Aiken
Michael Aintablian
Leslie Aisenman
Lorraine Alban
Stephanie Alderson
Judy Alexandre
Elspeth Allen
Sarah Allen
Nancy Alterman
Jeff Altman
Timothy Alvord
Vladimira Anderson
Stephen Andrews
Yvette Anguiano
Margaret Aranda, MD, PhD
Michael Arbuckle
Scott Arend
Jennifer Ash
Tammy Ashmore
Linda Athmer
Carol Attarian
Monica Avila

Joe Ayala
Christen B
Barbara Ballenger
Michelle Barksdale
Anthony Barlow
Heather Barnard
Leslie Beasley
Narine Bedrossian
Oscar Bello
Leslie Bennett
Jillian Benson
Joann Berge
Morene Berlin
Donald and Sherry L. Berry
Nancy Berry
Kate Bertolino
David Bezanson
Melissa Biernat
Maricarmen Birman
Robin Birney
Colin Biroc
Sherlyn Bishop
April Blackburn
Grant Blindbury
Meghan Borland
Logan Brashear
Riley Breen
Elise Brewin
Monzelle Brock
Donna Broersma
Stephanie Bromley
Linda Brown
Linda Brown
Margery Brown
Terry Brown
Lejla Brych

Neil Bucknam
Michael Bull
Judi Bumstead
Melissa Bumstead
Lindsay Burgdorf
Darrell Burgess
John Burke
Amanda Burns
Bill Burnul
Regina Buzzello
Cheryl Camacho
Dominique Cameron
Anna Campbell
Constance Campbell
Carey Capaldi
Natalie Caplan
Ami Carion
Silvia Carranza
Liliana Casas
Susan Chapin
Charity Chapman
Margaret Chapman
Renee Chupp
Archangelo Ciotti
Davy Clark
Desiree Clary
Shannon Claudio
Denise Clemen
Jessica Cochran
Amanda Coffman
Larry Cohen
Matthew Cole
Allison Coltin
Michael Colton
Colleen Conklin
Cesar Contreras

Betty Cooney
Elissa Cooper
Elissa Cooper
Andrew Cottle
Tanya Cressman
Marty Crowder
Davis Cuen
Crystal Cunningham
Dallas Dansby
Karen Daves
Paul Davis
Lori DeCelle
Ellie Dempster
Steve Dempster
Steven Dempster, Jr.
Lloyd Dent
Shanti Deojay
Dana DiBartolomeo
Vicki Dixon
Chad Dockery
Robert Dodge
Joanne Doherty
Cierra Donaldson
Margaret Douglas
Jeff Drobman
Reuven Duer
Kely Duran
Charissa Ebert
John Ebert
Sue Ebert
Carol Ecklund
Iris Edinger
Cameron Egan
Jeanne Ellis
Angela C. Embree
Teresa Ernest

Campaign A (cont'd)**Individuals submitting this campaign (cont'd)**

Mohammad Ali Esmaili	Dee Goldberg	Claudia Herr	Alexis Kagay
Eric Estrin	Luis Gomez	Hillary Herrera	Phillip Kalaniopio
Becky Evans	Martha Gómez	Tania Hespenheide	Ondrej Kalous
Elizabeth Even	Breonna Goodwin	Victoria Hibarger	Sheila Kappus
Scott Febbo	Nicole Goren	Marcia Hill	Ellen Katzman
Ashley Feeley	Jason Graf	Michell Hogan	Chris Kaul
Candie Fein	Paul Graham	Dena Hogland	Matt Kazmer
Rachella Felix	Kari Gravrock	Mark Hogland	Vanessa Keller
David Ferguson	Kristina Gray	Sasha Holmes	John Kelley
Shannon Fields	Mark Grech	Tracy Hopcus	Terrill Kelly
Lisa Fischer	Amy Greer	Rebecca Hopkins	Laurie Kelly-Weber
Tanja Foiles	Crystal Grimmond	Darla Horstman	Jennifer Kemp
Jennifer Fonseca	Amanda Gruber	Lisa Hotz	Kelly Kerr
Annika Forester	Joe Guardado	Josette Howard	Brian Kerwin
Devonie Fox	Jessica Guarino	Karin Hoyt	Jennifer Khan
Taylor Francis	Natasha Gubert	Summer Huber	James Kiser
David Frank	Brenna Gutell	Ryanne Hugins	Shawn Kittelsen
Leonard Freedman	Iliana Guzman	Debi Hulitt	Nancy Klassen
Lenka Fujikake	Anita Hachard	Lisa Hunzeker	Teresa Klassen
Vic Gallardo	Allison Hackney	Evelyn Hustis	Bonnie Klea
Silvana Garcia	Brittni Hale	Martin Iker	Kristin Klenck
Stephanie Garcia	Sabine Halfhill	Natalie Ilapogu	Veronica Klepadlo
Kathy Gardner	Emillia Hall	Danielle Jacobs	Julie Korenstein
Betty Gates	Lizette Hammer	Sarah Jacobson	Constance Koss
Savannah George	Sharon Hanson	Danielle Jenkins	Heather Kovach
Jessica Gesell	Ellen Hardbarger	S. Jensen	Danette Krueger
Ryan Gesell	Mirands Hatch	Marie C. Jimenez	Marvin Kwit
Sean Gesell	Kandee Hayes	Amie Johnson	Rick Ladd
Nataliya Geyzer	Carole Hellmann	Ashlee Johnson	Janet LaGuire
Heather Gibson	Robert Hellmann	Barbara Johnson	Wendi Lampassi
Lilah Gigi	Robert Hellmann	Jeanie Johnson	Stephanie Landau
Lior Gigi	Wendy Hellmann	Antonia Jones	Shannon Langbehm
Ellen Gillman	Jerry Hendrix	Meridith Jones	Rochelle Lapidés
Melinda Girard	Devorah Herberg	Pam Jones	Jose Lares
Dana Gluckstein	Gerardo Hernandez	Stacey Jones	Margot Learned
Julia Glukhovsky	Betty Heron	Ricki Jones-Frost	Marta Ledbetter

Campaign A (cont'd)

Individuals submitting this campaign (cont'd)

Natalie Lee	Megan McNaught	Vanessa Ochoa	Daniel Reder
Andrew Leporati	Amanda McNerney	Jennifer Oliver	Diana Redman
Kelly Lerma	Cheryl Mears	Jeri Oliver	Nancy Reims
Somer Levine	Leo Menard	Frances Onderwyzer	Millie Reina
Isaac Levy	Julia Meredith	Anna Ozerina	Paul Reiser
Sue Levy	Matthew Meser	Peggy Paola	Adam Reynolds
Miryam Liberman	Jessica Metivier	Sandra Paperny	Irma Reynoso
Susan Lilly	Nicole Mikals	Debbie Park	Grace Rice
Yan Linn	Kristen Milano	Karen Parker	Lesley Rich
Candice Lipsett	Jack Miles	Richard Parker	Julie Richmond
Josephine Lombardo	Jennifer Milgram-Pendergast	Leanna Partaker	Julie Rini
Monica Loomis	Stephanie Miller	Amy Pelayo	Sonya Robinson
Karen Lucky	Hilary Milner	Deborah Pendrey	Lieve Rochon
Robert Luna	Gustavo Miramontes	Maria Perez	Elizabeth Rohrer
Melissa Lurie	Jessica Moller	William Perkins	Katherine Rosado
Beth Lyons	Lisa Monroe	Kristen Perry	Elissa Rosen
Joseph M	Pattie Montgomery	Yuka Persico	Lynn Ross
Emily Mackenzie	Angie Moore	Joan Peters	Sylvia Rostami
Roxana Magnani	Brad Moore	James Piere	Mark Rotter
Michelle Magnuson	Ryan Moorman	Antonio Pierola	Steve Ruehlen
Hollie Maldonado	Brittanny Moran	Lee Pike	Cristina Ruiz
Sheriden Mansfeld	Sherry Morez	Rita Platten	Kristin Russell
Adam Mansuri	Ashli Morris	Paul Poirier	Celeste Russi
Lynda Martin	William Moss	Robert Pollard	Jaret Sacrey
Lynne Martin	Megan Mulligan	Elaine Portner	Maria Saenz
Martha Martinez	Peter Murnane	Danielle Postolica	Krista Sakuma
Mariem Mason	Audra Nakane	Crystal Provenzano	Katy Salinas
Joel Masser	James Naphas	Christine Pudney	Ani Sarkissian
Sara Matuzak	Richard Neff	Charo Pulley	Deborah Sayer
Gwen Mayer	Judy K Nelson	Christina Pulley	Dana Scheumaker
Margaret McCollum	Tim Nelson	Diane Quitorian	Brian Schwartz
Kevin McFadden	Shane Newell	Rachel Radebaug	Tracy Sear
Rick McFadden	Sarah Newton	Joanne Ramirez	Kelly Segura
Danielle McGrath	Maureen Nixon	Alison Rasch	Mildred E Seidman
Tom McLain	Pat O'Connor	Dorri Raskin	Mary Ann Seltzer
CR McNamara	Edward O'Brien	Joanne Ratshin	Elena Semper

Campaign A (cont'd)**Individuals submitting this campaign (cont'd)**

Jaime Semsch	Betsy Sumner	Rose White
Andrea Shapiro	Laura Swanson	Trish White
Nufar Sharon	Yesenia Swartz	Jessica Williams
Vicki Sharp	Judith Swope	S. Williams
Laura Monteverde Shaw	Natra Tabit	Sue Williamson
Richard Shaw	Courtney Tarbox	Heather Willis
Alana Sheeren	Becky Tawil	Darrel Wilson
Paz Shemesh	Eroca Tayler	Louis Wirthlin
Marcia Sherman	Jonn Tayler	Kim Sing Wong
Ashlee Shewell	Scott Taylor-Chanchoo	Emily Yang
Dave Shih	Eileen Texeira	Jenna Zarraonandia
Kathleen Shore	Jamie Thompson	Sara Zicherman
Katelyn Siegel	Marlon Tiglao	Richard Zive
Norman & Sharon Simmonds	Chris Toop	
Carolyn Slaton	Sharon Torrisi	
Charlesetta Smith	Vicki Tripoli	
Jessie Smith	Rochelle Trop	
Stephanie Sobel	Karen Trowbridge	
Richard Solomon	Melissa Trujillo	
Jorge M Soto	Amy Turnham	
John Spohn	Jennifer Van	
Lauren Stadler	Patricia VanBuskirk	
Jo Ann Stark	Tammy Van wagoner	
Suzanne Staten	Karen Vanhorenbeeck	
Breanne Steen	Larry Vanzant	
Jamie Stein	Vaughn Vartanian	
Sean Stevens	Allyson Verity	
Kristen Stewart	Xonia Villanueva	
Marjorie Stewart	Andrew Vlahos	
Brandon Stirewalt	Minako Watabe	
Dr Jennifer Stirewalt	Erica Watkins	
Susan Stolla	Ron Watson	
Krisie Stone	Ingrid Weissmuller	
Kristin Jensen Storey	Nicole Welch	
Lothar Struff	Claudia Weldon	
Heather Sturm	Scott Wheeler	

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...I am the parent of a child with an inoperable brain tumor. As a result, I have become acquainted with parents of other pediatric cancer patients and we are alarmed at the correlations between pediatric cancer rates and environmental toxins, as there appears to be in the former Santa Susana Lab area....

Beckie Cramer

|| A1-1

A1-1

Refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

...I grew up in Moorpark during the 70s and 80s. I remember the testing, the rumbles, the smoke. And I am blown away that it has taken so long for any cleanup, irresponsible and reprehensible! My Child is at risk because of these foolish excuses being proposed....

C. Gero

|| A2-1

A2-1

Refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

...I also demand that DOE initiate and utilize a site to rail transport plan for the clean up process and that they refrain from scaremongering local communities with talk and propaganda regarding a potential traffic impact if trucks are used. Traffic should be the least of everyone's concerns! Radionuclides and other contaminants are much deadlier and have made many community members ill, and some have died from their illnesses, including children. My own son had leukemia twice, before the age of 5, and two of our immediately adjacent neighbors, both in their early 30's at the time, were also fighting cancers (breast and thyroid). All three cancers are radiation related types.

We demand 100% full clean up utilizing site to rail transport, in a timely manner! We have already waited over half a century for a clean up plan to be implemented....

Maggie Compton

|| A3-1

|| A3-2

|| A3-3

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

...I truly hope you are reading the messages being sent to you. Already the child of a friend has had to undergo cancer treatments at age 5. Why is she finding out that so many of her little friends in the cancer ward in Children's Hospital in Los Angeles live within in a five mile radius of her home, which also happen to be within a five-mile radius of Santa Susana Field Laboratory (SSFL) Area IV? I AM outraged by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup. I don't want to see or hear of any other childhood cancer patients linked to this area because nothing has been done to clean up the contaminants.

FOLLOW THROUGH ON YOUR PROMISE....

Danielle Newcom

|| A4-1

|| A4-1 cont'd

|| A4-2

As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of

...My son is one of these "dots on the map". Please, for all these kids, their families and future kids. End this toxic legacy with full clean up....

Dawn Christensen

|| A5-1

...Please be sure that the DOE does its civic duty and takes responsibility to clean up the site. Don't let them get away with this Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup....

Eli Jarra

|| A6-1

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...My daughter was diagnosed with Hodgkin Lymphoma when she was 21. She grew up in Oak Park and regularly hiked in the local mountains. We will always worry about the exact cause of her cancer, and will never know for sure if living in proximity to SSFLs contaminated site was the reason, but I think that the association between blood cancers and the contamination is reason enough to undertake a full cleanup of the site. How can one not do everything possible to prevent cancers in our children (and in adults for that matter)....

Ellen Ruskin-Gillman

A7-1

...I also demand that DOE initiate and utilize a site to rail transport plan for the clean up process and that they refrain from scaremongering local communities with talk and propoganda regarding a potential traffic traffic impact if trucks are used. Traffic should be the least of everyone's concerns!!Radionuclides and other contaminants are much deadlier and have made many community members ill, and some have died from their illnesses, including children. My own son had leukemia twice, before the age of 5, and two of our immediately adjacent neighbors, both in their early 30's at the time, were also fighting cancers (breast and thyroid). All three cancers are radiation related types.

We demand 100% full clean up utilizing site to rail transport, in a timely manner! There is no room for nuclear waste in our communities!...

Jason Compton

A8-1

A8-2

A8-3

...Additionally, the frequency and pattern of cancer illnesses among the people living in the Oak Park, Simi Valley, Chatsworth and Canoga Park areas indicates that the radioactive contamination originating from the SSFL continues to harm these and other neighboring areas.

This weekend I will be attending a memorial for the son of a co-worker of mine. He was a resident of Oak Park, where he was raised from childhood. His death was primarily due to a particularly harmful sarcoma. He was only 22 years old....

Jay Boyette

A9-1

Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

A3-1 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

In accordance with NEPA, this Final EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to alarm locals out of supporting cleanup, but it is a true that the more soil that is removed to clean up the site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this EIS provide details of the transportation risk analysis.

A3-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. This EIS describes the potential impacts that implementing each alternative could have on the evaluated resource areas, including human health and traffic.

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...When my family moved to the area 3 years ago, we had not idea about the past activity at the SSFL. When we began renting a house in Woodland Hills, there was no mention of the dangers near us. My husband and I have 2 young daughters. They attend school in West Hills, very close to the SSFL site. We go to church in West Hills, very near the SSFL site. We were considering moving to West Hills, or buying a house in Woodland Hills, but now have second thoughts having done research into the past of the SSFL and inquiring about the dangers that are still present at the site. Since we have moved, we have become friends with many families that have children diagnosed with very rare cancers, associated with some of the toxins known to remain at the contaminated SSFL site. We absolutely do not want to put our young daughters at risk by buying property anywhere near the SSFL site. If news continues to get out regarding what remains at the site, and the potential health risks these contaminates pose to the community (and it will), I fear that the surrounding areas will suffer a great deal- the housing market, jobs, vitality in general will decline until the site is cleaned up 100%. I want to believe we all wish our children grow up to be critical thinkers, people who are truthful, and do good for others. Isn't that what makes a strong society? Isn't that what leaders are supposed to do? My husband and I urge you to please do the right thing in this situation. The contaminates are there, and people are getting hurt and dying because of it. What if you or one of your loved ones was living nearby and got sick or died? Please take action and clean up the site 100% before that happens (anything less than 100% cleaned up will continue to cause problems such as we see now). The clean up process will by no means be easy. That is understood, and to be expected. But it is also absolutely crucial for the health and well-being of thousands upon thousands of residents near the SSFL site, and undeniably the RIGHT thing to do. Please think about the long term gain for all those counting on the right outcome in this situation. The clean up has to happen. Please clean up the SSFL site 100%....

Jeff and Sabrina Flagg

...Peoples families, their children, their parents can be seriously affected by the toxic waste these polluters have left behind. How would they feel if it was their own families that had to live nearby? It makes me sick to think that anyone could care more about saving money, then innocent people's lives and well being....

...Anyone that agrees to any of these three ridiculous excuses of a solution, is just as guilty as they are. Why should children and mothers and fathers etc have to suffer with possible deadly sicknesses, because of the mistakes of people who seem to think they are above the law. Why would these people even think for a second that anything but 100% cleanup is acceptable....

Jessica Seifert

...I am frightened by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup. As a resident of a neighboring city, I am scared for my family and friends in this area....

Joyce Ezaki

... I worked their for the government when the agreement was made so why does ANYONE THINK THEY CAN CHANGE IT., NO NO NO!...

Judith Herdman

A10-1

A10-2

A10-2
cont'd

A11-1

A11-2

A11-3

A12-1

A13-1

A3-3 DOE acknowledges the commenter's preference for a 100% cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

A4-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your concern about cleanup of SSFL, and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

A4-2 DOE acknowledges your concern that DOE should follow through on its promise. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...My children are the most important things in my life! I will do what it takes to insure they are as safe and healthy as they deserve to be!...

Keily Carlson

||| **A14-1**

...I have a daughter who had cancer and a brain injury when she was just 20 months old. I am deeply concerned about why the site has not been safely cleaned up...

Melanie Rosenberg

||| **A15-1**

...I am the mother of a child with cancer so rare that there are less than 74 cases every year in America. Her cancer required 10x the normal dose of chemotherapy and she became addicted to morphine at four years old to treat the pain caused by the treatment meant to save her life. There are forty-six other children we've found so far that have rare childhood cancers surrounding the SSFL. We've discovered that West Hills is far above the national averages for pediatric Ewings Sarcoma and pediatric Optic Pathway Hypothalamic Glioma.

Childhood cancer is rare...but how many "coincidences" will it take to convince the Department of Energy that a pediatric cancer cluster exists in West Hills and the surrounding areas? It is unacceptable to treat my family this way. We have suffered through my daughter's cancer, which may have been avoidable if you had kept the promise to finish the cleanup by 2017.

I am deeply disappointed in the sloppy DEIS proposed methods. I know that DOE hires some of the most brilliant scientists and dedicated workers, but your DEIS proposes the most archaic and dangerous cleanup options possible- how can you list driving 60 miles through residential streets as a viable option when there are two service roads available? Why have you not offered more advanced methods to stop dust or the release of contamination? Why have you allowed my community to be afraid of the cleanup instead of educating them about the safe processes you will be required to follow? It is unacceptable to treat my community this way- we deserve a SAFE, complete cleanup.

Melissa Bumstead

||| **A16-1**

||| **A16-2**
||| **A16-3**
||| **A16-4**
||| **A16-5**
||| **A16-6**

...If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will be at increased risk of cancer, developmental disorders, immune disorders and other illnesses related to exposure to SSFL contaminants. I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

Mikala Partington

||| **A17-1**

A5-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding your concern about a full cleanup of SSFL. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

A6-1 DOE acknowledges your concern about DOE taking responsibility for cleaning up the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

A7-1 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your preference for full cleanup of SSFL, and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...Shame on you all!
I've lost 2 family members, and 2 neighbors to cancer,
We have fought, for years that you would do the honorable thing.
Apparently, no one cares, about our health, or our list ones.
Too bad that you haven't experienced, such losses. Perhaps, then you'd do something?
Nothing but, half truths from DOE.

Patricia Olsen

A18-1

Of course, if the DOE group would consent to all the removed contamination be dumped in their back yards that would be OK from what DOE says about how little contamination there is at SSFL. Its just a little is a LIE!

Rand & Shirley Malmin

A19-1

...I can't believe that the people can't force the government to carry out the terms of it's contract to clean up this horrible toxic waste site. At his inauguration ceremony President Trump said that we, the people, are now in charge. And we, the people, DEMAND that the US Government respect and honor the agreement it made to get the toxic waste out of the Santa Susana Field Laboratory site NOW!!! The "People" will not tolerate the existence of this toxic dump any longer!...

Robert Heron

A20-1

...We have a lot to be proud of here in Ventura county. For the most part it is a beautiful healthy place to live. Our farmers produce 2 billion dollars of delicious food annually. We are third in the state for oil production. A magazine chose us as the best place to live.

We don't want to be known for having a cancer cluster or hot spot making our neighbors sick for the next millennium, for seven generations.

After World War 2, scientists worked to beat the swords of war into tools for peace. They tamed the atom to produce power. They developed rockets that would eventually take us to the moon, and put up satellites that help us connect by cell phone.

Mistakes were made. A nuclear reactor went critical. Dangerous radioactive waste was burned in open air. Chemical waste was dried out in open pits to dry out or absorb into the soil or blow on the wind. We now know better than to do these practices. EPA has regulations to control waste disposal.

We have the opportunity to clean up the mess so that it does not continue to make our children sick. You hold the public trust in your hands. We ask you to clean up the mess made by our parent's generation.

We want specifically the standards appropriate for a residential community. The dust blows from SSFL to neighboring homes. The soil runs downstream by other homes. There is no safe level of radiation.

You want this area cleaned to the highest standards for your legacy for your great grand children....

Ron Whitehurst

A21-1

A21-2

A21-3

A21-4

A21-5

A21-3 cont'd

performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

A8-1 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

In accordance with NEPA, this Final EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives.

DOE's intent is not to generate opposition to the SSFL cleanup or to scare locals out of supporting cleanup, but it is true that the more soil that is removed to clean up the site, the larger the transportation effort (i.e., a larger number of truck trips). In the case of soil remediation, leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips from the site. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, results in more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this Final EIS provide details of the transportation risk analysis.

A8-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. This EIS describes the potential impacts that implementing each alternative could have on the evaluated resource areas, including human health and traffic.

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...My son has cancer. Little did I know when I moved to West Hills, CA in 1987 that I was exposing my children to the contaminants of the Santa Susana Field Laboratory's nuclear disaster. My son was diagnosed with PH+ Chronic Mylogenous Leukemia (CML) in 2014 and the doctors informed me that the mostly likely cause was radiation exposure. The child my son used to babysit came down with Hodgkins Lymphoma at age 19 and the little girl across the street from him with Leukemia. Now I'm asking for your help in getting the Santa Susana Field Laboratory cleaned up so no one else's children or grandchildren have to go through this....

Sandy Hanagami

||| A22-1

...I live less than a mile from the clean up area. Before, the contamination was widely known, I regularly walking in that area for years. AND now a housing developement is in Phase One DOWN slope from the lab. Shame on your fot doing anything less than a complete and total cleanup. People, children live there, Schools are downwide, some as close as one mile....

Stephen Galvin

||| A23-1

...I'm begging you to please, please make the DOE clean up this mess to protect our children, our families. The current contamination situation has put our lives at risk, has caused our children and neighbors to get sick. It must be cleaned up in full....

Tammy Bricker

||| A24-1
||| A24-2

...That is ridiculously unacceptable and unforgivable when it is clear that the remaining chemicals are causing long term harm to the the neighboring residents....

Victoria Hervey

||| A25-1

...I am a seasoned attorney, graduate of Georgetown Univ. Law Center and worked on International Environmental laws. My family resides in Chatsworth and this area of nuclear fallout. I am outraged and prepared to fight the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup. Federal courts in California and the Ninth Circuit are inclined to side with aggrieved homeowners who file actions for equitable relief. And pro bono lawyers are mobilizing....

Wendy Freedman

||| A26-1

A8-3 DOE acknowledges your concern about a 100 percent, timely cleanup of the site using site to rail transport. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.

A9-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

A10-1 Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

A10-2 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

...P.S: My life with Liberal Klans in Oregon!!

Arab/Muslim Americans are treated less than animals! We are called Sand N...

We are being prosecuted in a daily basis! High tech lynching, institutionally racism! Especially for Arab women!!

Oregon former late A.G. Dave Frohnmayer had my SS# blocked & prevented me from getting employed, made me homeless and jobless!

He was the one who started & initiated the fraud of taking over our homes!!

His bank robber Rep. Bob Ackerman, Doug McCool and Margaret Hallock hired Scarlet Lee/Barnhart Associates, forged my family's signature, gave our fully paid Condo to the thief Broker Bob Ogle. And his mom Karen Ogle " who was working in the USA Consulate in Jeddah, Saudi Arabia 1997-1999 & administered the power of attorney to have my sister signed it and add her son to the deed.", without my signature!!

Bob Ackerman had never responded to the Summon from the Court, and the sheriff never served him or arrested him either!!

ThIs is what kind of criminal government we have in Oregon!!

I ran five times for public offices! Voter Fraud & Sediton by Lane County government to protect & cover up for the two criminals Frohnmayer & Ackerman!! Oregon government is complicit with their crimes!!

Nadia Sindi

...As a health professional, an epidemiologist, the first recipient of "Peace Award" from the American Public Health Association, (APHA), a Human Right activist, and as a mother, I am I am disturbed, and outraged by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

The cancer causing effects of radioactives, and other atomic waste materials, has been known for decades now, and is well documented. Far too many people including children, have already been exposed in the SSFL areas, in the last few decades. According to different reports, many residents in that area has become ill, by many unknown illness, including cancer. Therefore, as a health expert, I urge you and demand that you fully comply with the AOC provisions, and clean up all the contamination, not only a portion! - keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provision.

Please help protect health of many people, including our children!

Do the right things, and protect innocent people, and the next generation residing there, and also the visitors!

Dr. Farideh kioumehr

A27-1

A28-1

A28-2

A28-1 cont'd

are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. Furthermore, Area IV and the NBZ have been extensively characterized for radiological and chemical contamination. These soil investigations have shown that much of the remaining chemical and radionuclide contamination at Area IV is concentrated near certain facilities. Additional chemical and radionuclide contamination is dispersed throughout Area IV and the NBZ in much smaller concentrations than those in the localized areas. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

DOE acknowledges your preference for 100 percent cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. In addition to a No Action Alternative in accordance with the requirements of NEPA, this Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil

Section 3 – Public Comments and DOE Responses

Campaign A (cont'd)Individuals submitting "Campaign A" with additional comments

cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

- A11-1** DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

- A11-2** As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. Because the AOC cleanup is not the normal way DOE, EPA, or

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

California DTSC perform soil cleanups, DOE evaluated the costs and benefits of the AOC cleanup versus what is normally done (that is, a cleanup that is based on risk and future land use). That analysis demonstrated that the AOC cleanup would be much more expensive and with minimal additional protection of public health and the environment.

A11-3 Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE acknowledges your preference for a full cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a No Action Alternative in accordance with the requirements of NEPA, this EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

A12-1 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter

Campaign A (cont'd)
Individuals submitting "Campaign A" with additional comments

is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

- A13-1** Section 8 of the 2010 AOC includes provisions for modification by mutual agreement of DOE and DTSC.
- A14-1** DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities.
- A15-1** DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007).

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

- A16-1** DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities. Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion and DOE's response on the topic of cancers and other illnesses near SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- A16-2** This EIS identifies and evaluates a reasonable range of alternatives that are appropriate for effecting cleanup of Area IV and the NBZ. Work would be performed in a manner that is protective of worker and public health and safety and the environment.
- A16-3** Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Campaign A (cont'd)
Individuals submitting "Campaign A" with additional comments

- A16-4** Methods for dust and contamination control are described primarily in Appendix D, Section D.6, and Chapter 4, Sections 4.3, 4.6 and 4.9. Measures to minimize impacts and mitigation measures are described in Chapter 6. The measures described in this EIS range from measures required by regulation to more innovative best management practices.
- A16-5** DOE has attempted to engage and educate the public through stakeholder outreach workshops and public meetings such as the SRE Workshop, Groundwater University and the Community-Developed Alternative Workshop Series, the Site Treatability Group, and the Soil Characterization Tech Stakeholder Group. This Final EIS is also a way to educate the public on the technical and environmental issues of the cleanup.
- A16-6** DOE acknowledges your desire for a safe, complete cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- A17-1** DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.
- DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS. Exceeding an AOC LUT value does not necessarily mean that the constituent is present at dangerous levels. For further discussion of this topic, refer to Section 2.5, "Toxicity of Soil Contaminants" of this CRD.
- Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

A18-1 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Campaign A (cont'd)**Individuals submitting "Campaign A" with additional comments**

- A19-1** DOE agrees with placing a high priority on health and safety and remains committed to protecting the health and safety of current and future users of the site and of the residents in the surrounding communities. Please see Section 2.7, "Offsite Impacts," and Section 2.8 "Cancer and Other Illnesses Near SSFL," of this CRD for discussions about offsite impacts. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Also refer to Section 2.5, "Toxicity of Soil Contaminants," and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for information relevant to residual contamination remaining in Area IV.
- A20-1** DOE acknowledges your concern about DOE honoring its agreement to get toxic waste out of the SSFL site. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- A21-1** DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- A21-2** As indicated in Chapter 1 of this Final EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater; and intends to complete remediation of SSFL Area IV and the NBZ in compliance with applicable requirements (including regulations, orders, and agreements) for cleanup of radioactive and hazardous substances. Chapter 1, Section 1.3, contains a brief history of activities at SSFL, including previous cleanup efforts. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV at SSFL can be found at <http://www.etec.energy.gov/>. Chapter 3, Sections 3.9.5 and 3.9.6, of this EIS contain information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. At the time of the accident it was estimated

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. Additional information about the 1959 SRE accident can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html. With respect to the statements regarding burning radioactive and chemical waste in open pits, the Former Sodium Disposal Facility was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The facility was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). Additional information can be found at http://www.etec.energy.gov/Operations/Support_Ops/FSDF.html.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, please see Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response. Wastes generated under the activities evaluated in this EIS will be managed in accordance with applicable State and Federal regulations. Generation and management of radioactive and other wastes resulting from the activities evaluated in this Final EIS are addressed in Chapter 4, Section 4.10, of this EIS. This Final EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS will inform Federal decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste.

- A21-3** Thank you for your comment. It has been included in the Administrative Record for the EIS.
- A21-4** DOE acknowledges your preference for the residential standards. Since release of the Draft EIS, Boeing entered into a land use covenant that restricts future use of the

Campaign A (cont'd)Individuals submitting "Campaign A" with additional comments

property it owns at SSFL to open space (Ventura County 2017a, 2017b); this includes Area IV and the NBZ. A residential scenarios that includes consuming products grown in a backyard garden, is not appropriate for property that would be restricted to an open space land use. In this Final EIS, DOE retained the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative. Each of these alternatives retains an analysis that reflects cleanup levels based a suburban resident without a garden as was done in the Draft EIS. The Conservation of Natural Resources Alternative now includes a second scenario which establishes cleanup levels based primarily on a recreational user, with some constituents being further limited by ecological risk.

A21-5 As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

A22-1 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the

Campaign A (cont'd)
Individuals submitting "Campaign A" with additional comments

A23-1 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS. Exceeding an AOC LUT value does not necessarily mean that the constituent is present at dangerous levels. For further discussion of this topic, refer to Section 2.5, "Toxicity of Soil Contaminants" of this CRD.

Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Campaign A (cont'd)
Individuals submitting "Campaign A" with additional comments

A24-1 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS. For further discussion of this topic, refer to Section 2.5, "Toxicity of Soil Contaminants" of this CRD.

Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Campaign A (cont'd)

Individuals submitting "Campaign A" with additional comments

- A25-1** DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.
- A26-1** Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.
- A27-1** Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.
- A28-1** DOE acknowledges your concerns. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of this topic. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this EIS.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

A28-2 DOE acknowledges your preference for a cleanup of all contamination in full compliance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD regarding commenters' preferences. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Campaign B

I am writing to comment on DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

As you know, SSFL was the site of nuclear and rocket engine tests that went on for decades, leaving a legacy of contamination with dangerous radionuclides and toxic chemicals. These contaminants migrate from the site and put nearby communities at risk of cancer and other illnesses. Federal studies indicate higher rates of certain cancers for both workers at the site as well as in the offsite population. It is therefore imperative that the site be fully cleaned up, as DOE committed to do in 2010 when it signed the Administrative Order on Consent (AOC) to clean up to background levels of contamination.

Unfortunately, all of the cleanup options presented in DOE's DEIS violate the AOC cleanup agreement, leaving between 34% - 94% of the site not cleaned up! The AOC requires that all detectable contamination be cleaned up, and it expressly bars any "leave in place" options. DOE claims that its weaker cleanup options are sufficiently protective of public health, but they are not - indeed, DOE's second and third options manipulate longstanding EPA protective standards and guidelines. Furthermore, the National Academy of Sciences and all federal agencies state that there is no safe level of radiation exposure.

DOE failed to consider routes for the transportation of contaminated soil that avoid neighborhoods. DOE failed to consider, for example, alternative truck routes as well as the railroad station less than a quarter mile north of the site that is able to ship out contaminated soil. The station is accessible by routes that do not pass by any residences. Instead it only considered trucking the waste to a railroad line 60 miles away.

DOE must comply with the AOC and reject all of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation. DOE also must recognize that regarding SSFL, it does not have the authority to decide what the cleanup will be. Under both the Resource Conservation and Recovery Act (RCRA) and the AOC, it is the California Department of Toxic Substances Control that makes the cleanup decisions, not DOE.

SSFL has been left contaminated for far too long. It's high time for DOE to fulfill its cleanup obligations, honor the AOC that it signed, and help ensure that current and future generations are not at risk from SSFL contamination.

B-1

B-2

B-3

**B-2
cont'd**

B-4

**B-2
cont'd**

B-1 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

Please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

B-2 DOE does not agree with the claim that all of the cleanup options presented in the Draft EIS violate the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

This Final EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. (Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.) In response to public input since the 2010 AOC was signed, this EIS also analyzed alternatives that determine

Campaign B (cont'd)

cleanup levels by considering risk to human health and the protection of natural resources. This latter approach is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

As discussed in Section 2.2 of this CRD, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

- B-3** Please refer to Section 2.9, “Options for Transportation of Waste from SSFL,” of this CRD for a discussion of this topic and DOE’s response.
- B-4** NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision (ROD) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE’s cleanup of Area IV and the NBZ.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and

Campaign B (cont'd)

consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Campaign B (cont'd)

Individuals submitting this campaign

Susan Armistead
Tiobe Barron
Pam Borso
Sandra Burnett
Vera Chino
Natalie DeBoer
Marianne Flanagan
Renata Flatinger
Mary Foulger
Virginia Hilker
Sandra Joos
Steve Kern
Dr. Farideh Kioumehr
Paul Liebow
Kim Lombardozzi
Mariem Mason
Martin and Sharon McGladdery
Ned Overton
Phoebe Quillian
Dorri Raskin
Margaret Rogers
Richard and Carolyn Rosenstein
Valerie Schweiss
Penni Steinberg
Sheila Suarez
Robert Sullivan
Rebecca Overmyer-Velazquez
Paul Waller

Campaign B (cont'd)

Individuals submitting "Campaign B" with additional comments

...I have had two relatives, who were long time residents of Simi Valley, die of lung cancer. Neither had other risk factors for lung cancer. I'm told that Simi Valley is a hot spot for lung cancer. I believe it was from the radiation from SSFL....

Marsha Epstein

|| B1-1

B1-1

DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

Campaign C

U.S. Department of Energy NEPA Document Manager, SSFL Area IV EIS
Stephanie Jennings
stephanie.jennings@emcbc.doe.gov

Dear Ms. Jennings:

I live in the Susana Knolls, a community of approximately 500 homes located directly beneath the contaminated Santa Susana Field Laboratory (SSFL). Those of us who live so close to SSFL are particularly vulnerable to SSFL's nuclear and chemical toxins that migrates offsite, especially during wind or rain events, which have been frequent this year. Many of us have creeks running through our properties, and have long been concerned with the hundreds of surface water violations for contamination migrating from SSFL reported by the Water Board. We are also aware of the numerous federal studies indicating higher rates of certain cancers associated with proximity to SSFL.

C-1

C-2

C-3

C-4

C-3
cont'd

C-5

C-3
cont'd

I was therefore exceedingly alarmed by the Department of Energy Draft Environmental Impact Statement (DEIS) for the SSFL cleanup. Every single one of DOE's proposed cleanup alternatives violates the commitment it made in 2010 when it signed the Administrative Order on Consent to clean up all detectable contamination. The first option DOE proposed leaves 34% of the contamination not cleaned up, the second leaves 86% not cleaned up, and the third leaves up to 94% not cleaned up. That is unconscionable!

DOE's DEIS also makes numerous mentions of "natural attenuation" meaning that in some 70 years the contamination will go away on its own. That will do nothing to protect me and my neighbors, who will continue to be exposed to hazardous contamination for decades. Leaving contamination on site, not remediated, also violates the AOC which prohibits "leave in place" options. DOE must uphold its 2010 AOC cleanup commitment and reject all of the cleanup alternatives proposed in the DEIS. The EIS should be focused exclusively on how DOE will cleanup to background per the AOC, not propose alternatives to it.

Finally, DOE's DEIS also refuses to properly acknowledge that it does not get to decide how much contamination gets cleaned up. The AOC makes it perfectly clear that the DOE is a regulated entity with the Department of Toxic Substances Control (DTSC) having oversight. DTSC determines the cleanup, not DOE.

In 2014 DOE SSFL Project Manager John Jones told the SSFL Work Group that DOE signed the AOC because the AOC was "the right thing to do." Please don't now do the wrong thing by violating the AOC. DOE must fully live up to the obligations it assumed in the AOC and under the law to completely clean up the pollution it created so close to our homes and families. There must be no consideration whatsoever of options that violate the cleanup agreement.

- C-1 DOE disagrees with the implication that Area IV and the NBZ are highly contaminated and that substantial contamination is migrating offsite. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.
- C-2 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- C-3 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). In response to public input since the 2010 AOC was signed, this EIS also analyzed alternatives that determine cleanup

Campaign C (cont'd)

levels by considering risk to human health and the protection of natural resources. This latter approach is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

As discussed in Section 2.2 of this CRD, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

- C-4 Monitored natural attenuation would only be applied to soil containing low concentrations of TPH that do not pose a risk to human health and the environment. See Chapter 2, Section 2.3.2 of this Final EIS for additional information. (Simple polycyclic aromatic hydrocarbons may be amenable to natural attenuation and would be evaluated on a location-by-location basis during development of soil remediation plans.)The monitoring aspect of the remedy would be performed to verify that the contaminants would remain in place; that is, within the boundaries of SSFL. The treatment of soil in this fashion would not put the public using the site, or living near the site, at risk.
- C-5 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to “rigorously explore and objectively evaluate reasonable alternatives” (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision (ROD) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE’s cleanup of Area IV and the NBZ.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are

Campaign C (cont'd)

based on risk to human health as well as the protection of natural resources. This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Campaign C (cont'd)

Individuals submitting this campaign

Sibylle Allgaier
Kelly Bontty
Kathleen Candish
Jeane De Mill
Chris Flexhaug
Carrie Georgieva
Wendy Jones
Sharon Knapton
Rochelle Lapidés
Willie Lapin
Torrie Marsh
Jean Moyle
Kathryn Steffen
Katherine Weisman
Samantha Wyllie

Campaign C (cont'd)

Individuals submitting "Campaign C" with additional comments

...I have now lost my husband to cancer... he was only 56 years old and we moved into the area unknowing at the end of 1989.

|| C1-1

We need to get as close to 0% as possible... I realize that may not be attainable but at least that should be the goal!...

|| C1-2

Leslie Kemp

...I used to live in Simi Valley, and part of the reason why my family moved away is the contaminated Santa Susana Field Laboratory (SSFL). My mother used to live in the Santa Susana Knolls, and was terrified of what lurked above her in the hills. My aunt, who was pregnant with her first child at the same time that I was pregnant with mine, lived along the arroyo beneath the property, and when her little boy was stillborn, she turned to others in her community for support and guidance through the darkest time in her life. She was startled to find many other women in Simi Valley and Chatsworth who had children who were other also stillborn or had severe birth defects. This is not acceptable, none of it.

|| C2-1

Melissa Baffa

...Those of us who live so close to SSFL are particularly aware of the numerous federal studies indicating higher rates of certain cancers associated with proximity to SSFL.

|| C3-1

I AM ONE OF THOSE CANCER PATIENTS!
Having had thyroid cancer, I am now being screened for bladder issues! These are the TWO CANCERS that have been found in clusters in our area!...

Susan Selvaggio

...My aunt had thyroid cancer, which is one of the cancers in the study.

|| C4-1

Janine Martorana

C1-1 DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

C1-2 DOE acknowledges your concern about cleanup to as close to zero percent as possible. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

C2-1 DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

DOE acknowledges your concerns and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity

Campaign C (cont'd)
Individuals submitting “Campaign C” with additional comments

of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

- C3-1** DOE acknowledges your concerns and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- C4-1** DOE acknowledges your concerns and refers you to Section 2.8, “Cancer and Other Illnesses Near SSFL,” of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Campaign D

I am contacting you to notify you that I would like for you to clean up the contamination spill at Santa Susana! Why hasn't this been done? It was supposed to be done years ago! Many are getting sick from the contamination! Please clean that area up fast!

||| D-1
||| D-2

D-1 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, “Preferences for Cleanup,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of DOE’s completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

D-2 DOE disagrees with the implication that Area IV and the NBZ are highly contaminated and that substantial contamination is migrating offsite. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, “Public Perceptions about Waste and Contamination in Area IV,” of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, “Offsite Impacts” of this CRD, there is no

Campaign D (cont'd)

evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act. Also, see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of concerns about illness in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Campaign D (cont'd)

Individuals submitting this campaign

Carlos Cervantes
Juan Cervantes
Maria Cervantes
Mayra Cervantes
Ben Frank

Petition 1



No Breaking of SSFL Cleanup Commitments!

TO: Elected Officials representing communities near the Santa Susana Field Laboratory

We are deeply disturbed to learn of efforts to breach the commitments made in 2010 for a full cleanup of all the nuclear and chemical contamination at the Santa Susana Field Laboratory. Some of the parties responsible for the contamination are pushing to not have to clean up the great majority of the contaminated soil. This is unacceptable. It would leave all who live in the area around the polluted lab at risk from radioactivity and other toxic materials migrating off the hill. We ask that you take strong immediate actions to assure that this doesn't happen. Please take effective steps to make sure that the Department of Toxic Substances Control, the Department of Energy, NASA and Boeing comply with the 2010 requirements to fully clean up all of the contamination at the site.

Sincerely,

NAME	EMAIL	Zip Code
DAVID E. TROY TH		90290
Cristal Stonery		90290
Daniel von Watter		90290
Lesla Lauria		90290
Dina Trabouci		90290
Jim Everett		90290
Jessica Semmel		90290
CHARLES TATE		91367
_____		91206
Sean Skoway		91207

*Collected 2 years ago
at Anaheim in George
David E. Troy*

P1-1
P1-2
P1-1
cont'd

P1-1 DOE acknowledges your support for the Cleanup to AOC LUT Values Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please note that DOE is only responsible for cleanup of Area IV and the NBZ at SSFL; cleanup of other areas of SSFL is the responsibility of NASA and Boeing. NASA and Boeing activities at SSFL are considered as a part of cumulative impacts (Chapter 5) but otherwise are outside the scope of this EIS. Also, please refer to the Topic of Interest "Compliance with the 2010 Administrative Order on Consent" (Section 2.2 of the CRD) for a discussion on this topic and DOE's response.

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

P1-2 DOE disagrees with the implication that Area IV and the NBZ are highly contaminated and that substantial contamination is migrating offsite. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith

Section 3 - Public Comments and DOE Responses

Petition 1 (cont'd)

2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.)

DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this Final EIS. Exceeding an AOC LUT value does not necessarily mean that the constituent is present at dangerous levels. For further discussion of this topic, refer to Section 2.5, "Toxicity of Soil Contaminants" of this CRD.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Petition 2

Don't let DOE break its SSFL cleanup commitments!

The Department of Energy recently released a Draft Environmental Impact Statement (DEIS) that proposes three alternative cleanup plans for its operational area of SSFL. The three alternatives would respectively leave up to 39%, 91% or up to 99% of the contamination on site, where it can continue to migrate and put nearby communities at risk. All of the alternatives violate the Administrative Order on Consent (AOC) that DOE signed in 2010, which committed them to clean up all detectable contamination. DOE's DEIS also fails to acknowledge that as the polluter, it doesn't have the authority to decide how much of the mess that it made is going to get cleaned up. That decision rests with the California Department of Toxic Substances Control, not DOE. (Click [here](#) to learn more about DOE's attempt to break out of its cleanup commitments.)

Take action today! Demand that the Department of Energy uphold its promise of a full cleanup of SSFL. Below is a sample comment - we recommend personalizing it if you can. Please also share widely with your friends and neighbors!

Stephanie Jennings
U.S. Department of Energy

Comment on DOE's Draft EIS for SSFL

Dear Ms. Jennings:

I am outraged by the DOE's Draft Environmental Impact Statement (DEIS) for the Santa Susana Field Laboratory (SSFL) Area IV cleanup.

DOE's DEIS makes it abundantly clear that DOE wants to break out of its commitment to clean up all of its contamination at SSFL. Instead, DOE proposes leaving between 39% and 99% of the dangerous radionuclides and toxic chemicals on site, not cleaned up, where they will continue to migrate and put nearby communities at risk. That is unacceptable!

P2-1

P2-2

P2-1
cont'd

P2-1 DOE does not agree with the claim that all of the cleanup options presented in the Draft EIS violate the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

This EIS analyzed an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). In response to public input since the 2010 AOC was signed, this EIS also analyzed alternatives that determine cleanup levels by considering risk to human health and the protection of natural resources. This latter approach is consistent with that used by DOE throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

As discussed in Section 2.2 of this CRD, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

P2-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In

Petition 2 (cont'd)

DOE must abide by the 2010 AOC and reject all three of the cleanup alternatives proposed in the DEIS, as well as the "no action" alternative for soil remediation, all of which are prohibited under the AOC. Any "leave in place" cleanup methods, including natural attenuation and "no action" and should not be considered.

P2-1
cont'd

DOE also fails to acknowledge that the AOC is a legally binding agreement with the DTSC, and DTSC as the regulator makes the cleanup decisions, not DOE. The legal obligations in the AOC already require full cleanup, and even if it didn't exist, the state toxics agency is the regulator who decides cleanup requirements for the toxic chemicals. That isn't within the power of the polluter, DOE. DOE should withdraw the EIS, as it violates cleanup commitments and DOE has no legal authority to decide the cleanup in the first place.

P2-2
cont'd

If all of the contamination at SSFL is not cleaned up per the AOC cleanup agreement, people who live nearby and future visitors to the site will be at increased risk of cancer and illnesses related to exposure to SSFL contaminants. I demand that you help protect our health and keep your cleanup commitment by ensuring that DOE's final EIS fully comply with the AOC provisions and clean up ALL of the contamination.

P2-3
P2-1
cont'd

Sincerely,

PAGE 1

DAVID E. TROY III David E. Troy Iris Edinger Iris Edinger	
Barry KATZEN Barry Katzen Lina Gallucci	
Barry Katzen Barry Katzen Richard M. Shemban	

addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision (ROD) pursuant to NEPA. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

P2-3 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Petition 2 (cont'd)

DOE remains committed to protecting the health and safety of current and future users of the site and of residents in the surrounding communities. This Final EIS evaluates the human health risk for each of the remediation alternatives. Each of the three soil remediation action alternatives analyzed in this EIS would leave Area IV and the NBZ safe for their designated future use as open space; offsite residents would also be protected. The reader is referred to the summary of impacts presented in Chapter 2, Section 2.8 and to Chapter 4, Section 4.9, "Human Health," of this Final EIS. Exceeding an AOC LUT value does not necessarily mean that the constituent is present at dangerous levels. For further discussion of this topic, refer to Section 2.5, "Toxicity of Soil Contaminants" of this CRD.

Also please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Petition 2 (cont'd)

NAME ADDRESS CLIPBOARD 1
Dagmar
~~the~~
Ned Leder
M. Leder
Tanya Strenzi [REDACTED]
MADELINE TAYLOR
M. Taylor oodled
Linnea Richards
Alii Richel Adler
Dona DeBull
Stephen Alamango
Theresa Brady
Theresa Brady [REDACTED]

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Petition 2 (cont'd)



NOTE: THESE TWO PAGES OF SIGNATURES
WERE COLLECTED @ TOPANGA PEACE
ALLIANCE MEETING OF MARCH 3, 17

I am DAVID E. TROY III
21844 CORVO WY
T ANG CA

David E Troy

CLIPBOARD 2

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

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3
4 TRIBAL MEETING RE:
5 DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
6 REMEDIATION OF AREA IV AND THE
7 NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD
8
9 LABORATORY
10
11
12 FRIDAY, FEBRUARY 17, 2017
13 U.S. DEPARTMENT OF ENERGY
14 4100 GUARDIAN STREET
15 SIMI VALLEY, CALIFORNIA 93062
16 10:31 a.m.
17
18
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20
21
22
23
24 REPORTED BY: PHILLIP DEAN ORR, CSR NO. 7656
25
25 FILE NO.: 148216

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3-1444

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

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2	SPEAKERS	PAGE
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Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 Friday, February 17, 2017, Simi Valley, CA, 10:31 a.m.
2 * * * * *
3 MS. LOWE: Okay. Good morning, everyone. Thank
4 you so much for coming. I believe I know everyone. But
5 my name is Wendy Lowe, and I'd like to welcome you to
6 this hearing, which is being hosted by the Department of
7 Energy -- U.S. Department of Energy. DOE has prepared a
8 Draft Environment Impact Statement, or EIS, to evaluate
9 the potential environmental impacts associated with
10 cleanup of Area IV and the Northern Buffer Zone at the
11 Santa Susana Field Laboratory. And, the goal of this
12 hearing is to provide you with the opportunity to submit
13 your comments on the draft document for consideration by
14 DOE as the Department finalizes the Environmental Impact
15 Statement.
16 Today is Friday, February 17th, 2017, and this
17 meeting is being convened at 4100 Guardian Street in
18 Simi Valley, California, and the time is now 10:31.
19 I would like to point out a few housekeeping
20 items before we get started. This is the only door into
21 the room, and the restrooms are located to the right as
22 you leave this room. And, if there's an emergency and
23 we need to exit the building, you'd go left to go
24 immediately outside of the building. We do have water
25 if you would like water here.

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3-1445

Section 3 – Public Comments and DOE Responses

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 Feel free to leave the hearing room at any
2 time, but we'd request that if you do so, that you do it
3 in a way that minimizes distraction.

4 Please silence your cell phones and refrain
5 from any conversations in this room.

6 And, before we begin, I would like to
7 introduce John Jones and Stephe Jennings from the U.S.
8 Department of Energy. They will provide an overview
9 presentation about the Draft Environmental Impact
10 Statement. Copies of the slides that John and Stephe
11 will be using for their presentation will be available
12 on the EIS website after next Tuesday. And, if you
13 prefer, hard copies are available at the registration
14 table. After John and Stephe's presentation, I will
15 review the ground rules for this hearing and we can
16 begin taking your comments. John Jones is the director
17 at the U.S. Department of Energy's Energy Technology
18 Engineering Center, and he's been in that position since
19 2011, and he has the overall responsibility of
20 completing remediation at the site.

21 MR. JONES: Thank you, Wendy, and good morning. My
22 name is John Jones, and, as Wendy stated, I am the
23 director for the U.S. Department of Energy's Energy
24 Technology Engineering Center or ETEC. On behalf of
25 DOE, I would like to welcome you to the public hearing.

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 As Wendy mentioned, our purpose this evening is to
2 gather your input into the Department's recently
3 released EIS for Area IV and the Northern Buffer Zone of
4 the Santa Susana Field Lab. We will give you more
5 background about the Draft EIS and a brief history of
6 operations at the site in a moment.

7 I would like to introduce my colleague Stephanie
8 Jennings, who is the deputy director at our site and
9 will serve as the official hearing officer for this
10 afternoon -- this morning. In addition, we thank
11 everybody for attending the meeting, and we are here to
12 make sure everybody feels comfortable and safe to
13 provide their comments.

14 A brief history on the site. After World War
15 II, the U.S. Government was interested in developing the
16 peaceful purposes for atomic energy. In 1953, the
17 government approved a nuclear research and development
18 center in Area IV of the Santa Susana Field Lab that
19 would eventually be known as ETEC. During its
20 operation, the center housed and tested a number of
21 small research reactors. Researchers also explored best
22 practices in nuclear waste management and the use of
23 liquid metals as a coolant for nuclear energy.

24 The research at this site was critical in
25 developing our modern nuclear energy program that today

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 helps power everything from our space program to
2 electricity generation from commercial nuclear reactors.
3 This research resulted in localized releases of
4 chemicals and radionuclides to the soil, bedrock, and
5 groundwater. The Draft EIS lays out a range of
6 alternatives to address the contamination that remains
7 at Area IV and the Northern Buffer Zone.

8 I want to speak briefly about our path so far.
9 In 2003, DOE released an Environmental Assessment for
10 Area IV and the Northern Buffer Zone following an
11 internal review of remediation needs at the site. After
12 a court challenge to this assessment, in 2007 a federal
13 judge ordered DOE to complete an Environmental Impact
14 Statement per the National Environmental Policy Act,
15 NEPA. The order enjoined DOE from relinquishing control
16 over any portion of Area IV until DOE had completed an
17 Environmental Impact Statement and issued a Record of
18 Decision as required by NEPA. Based on that finding,
19 the court chose not to address the plaintiff's
20 Comprehensive Environmental Response, Compensation,
21 Liability Act, CERCLA, and the Endangered Species Act
22 claims, ESA. As a result of this order, DOE began the
23 EIS process, including extensive research, planning and
24 public involvement.

25 DOE initiated a significant characterization

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 effort with multiple agencies, including California
2 Department of Toxic Substance Control, or DTSC, and
3 universities as well. DOE provided 41 million in
4 funding to the Environmental Protection Agency to
5 perform a thorough radiological study of the site. The
6 EPA concluded this was one of the most comprehensive
7 technical evaluation studies for low-level radiological
8 contamination the agency had ever conducted. This
9 study, along with the chemical studies performed by DOE
10 with DTSC, included more than 10,000 soil samples as
11 well as installation of additional groundwater sampling
12 wells and analysis of groundwater sampling results. The
13 Draft EIS is the culmination of careful study by
14 environmental and technical experts.

15 This process made a significant effort to be
16 transparent and involved many partners, including the
17 community, in the important studies that were completed.
18 Community involvement programs have included a workshop
19 about the accident that occurred in 1959 at the Sodium
20 Reactor Experiment, Groundwater University workshops,
21 the Soil Treatability Investigation Group, and the
22 Community Workshops to Develop Alternatives.

23 Now I would like to ask Stephanie Jennings, the
24 hearing officer for this meeting, to discuss the NEPA
25 involvement process, and to provide more information

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 about the Draft. Stephanie.

2 MS. JENNINGS: Thank you. Thanks, John, and good

3 morning everyone again. The National Environmental

4 Policy Act, often called NEPA, is a law that designates

5 a process that federal agencies must follow to consider

6 the environmental effects of a project. In our case,

7 the project involves the remediation of Area IV and the

8 Northern Buffer Zone. Under NEPA, federal agencies are

9 required to assess and disclose environmental effects of

10 a range of reasonable alternatives and present them to

11 the public in a Draft Environmental Impact Statement.

12 The analysis of alternatives in the Draft EIS is at the

13 heart of the federal environmental review process,

14 enabling the public to better understand the complexity

15 and trade-offs that will be involved in cleaning up the

16 site.

17 The process began with a Notice of Intent to

18 Prepare the EIS followed by an initial scoping and

19 comment period. Since that time, DOE has extensively

20 studied and analyzed the site, resulting in the Draft

21 EIS, which was published on January 13th. There is a

22 60-day comment period for public input which will end on

23 March 14. At the end of the public comment period, DOE

24 will review all public comments, make changes as

25 appropriate and publish a Final EIS. Following the

Response side of this page intentionally left blank.

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 Final EIS, DOE will issue a Record of Decision for
2 cleanup of the site.

3 The Draft EIS analyzes the environmental
4 impacts of the Administrative Order on Consent or AOC
5 agreement and other alternatives that consider risk to
6 human health, and the protection of natural resources to
7 determine cleanup levels. This approach is consistent
8 with cleanup actions at other DOE sites and is in
9 compliance with federal law. The comparative analysis
10 of these alternatives allows stakeholders to understand
11 the balance and trade-offs associated with the various
12 options for site cleanup.

13 DOE remains committed to a site cleanup that
14 is protective of the public and the environment. The
15 Purpose and Need Statement you see on the screen here is
16 also in the Draft EIS and represents a summary of why
17 we're undertaking this process. In the Draft EIS, Area
18 IV references the traditional area of operations, and
19 the Northern Buffer Zone, well, which includes 182 acres
20 immediately adjacent to Area IV.

21 As I mentioned, NEPA states we must examine a
22 range of reasonable alternative approaches to
23 remediating the site. In developing this range, we
24 considered input received at public scoping meetings and
25 concepts developed by participants in the community

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3-1451

Section 3 – Public Comments and DOE Responses

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 developed alternative workshops. As required by NEPA,
 2 each alternative was considered thoroughly and potential
 3 environmental impacts from each alternative were
 4 analyzed

5 I want to briefly explore the alternatives in
 6 the Draft EIS starting with the soil remediation
 7 alternatives. You will note on this summary slide that
 8 there are four alternatives, beginning with No Action,
 9 which is a required -- which is required as a baseline.

10 Beginning on the right, you'll see first an
 11 alternative we labeled the Cleanup to AOC Look-Up Table
 12 Values, which adheres to the levels in the agreement
 13 signed in 2010 by DOE. Under this alternative, DOE
 14 would remediate soil in Area IV and the Northern Buffer
 15 Zone to meet chemical and radionuclide cleanup look-up
 16 table values established in accordance with the 2010
 17 Administrative Order on Consent. DOE would start at one
 18 side of the site and proceed across Area IV and the
 19 Northern Buffer Zone, removing soil at any location that
 20 exceeds a look-up table value. An estimated 933,000
 21 cubic yards of soil would be removed from the site,
 22 assuming that the proposed cultural and biological
 23 exemptions are approved by US Fish and Wildlife Service,
 24 California Department of Fish and Wildlife, the State
 25 Historic Preservation Office, and ultimately, DTSC. The

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 planning estimate for soil removal and backfill is
2 approximately 115,000 truck trips over at least a
3 10-year period.

4 Second is the Cleanup to Revised Look-Up Table
5 Values. Under this alternative, a revised set of look-
6 up table values would be established for chemicals.
7 Cleanup levels for radionuclides would remain the same
8 as those under the Cleanup to Administrative Order on
9 Consent Look-Up Table Values Alternative. This revised
10 look-up table would evaluate a reduced list of
11 chemicals. These are chemicals believed to cause a
12 concern for human health at the site based on the
13 extensive site studies that John mentioned previously.
14 If the soil in a particular area exceeded the revised
15 look-up table value for any chemical or the AOC Look-Up
16 Table Value for a radionuclide, the soil would be
17 removed. Approximately 192,000 cubic yards of soil
18 would be removed under this alternative. The planning
19 estimate for soil removal and backfill is approximately
20 23,800 truck trips over a two and a half year period.
21 Like the AOC alternative, biological and cultural
22 resources would be protected, while also protecting the
23 public and the environment.

24 Third is the Conservation of Natural
25 Resources. This approaches cleanup using a risk-based

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 analysis which is consistent with DOE cleanup sites, as
2 well as Superfund cleanup sites across the country. DOE
3 would clean up soil to a level that would protect human
4 health by removing soil with concentrations of chemicals
5 or radionuclides that exceed criteria established using
6 a risk assessment process. Concentrations of
7 contamination would be averaged over a defined risk
8 assessment unit in accordance with standard practice for
9 cleanups across the country. This alternative would
10 reduce risk to the public and the environment, yet
11 conserve natural resources by disturbing less land than
12 the other alternatives, thereby reducing the potential
13 of impacting visual, biological, cultural, and water
14 resources. An estimated 148,000 cubic yards of soil
15 would be removed from the site within a two-year time
16 frame. The planning estimate for soil removal and
17 backfill is approximately 18,400 truck loads. Like the
18 first two alternatives, biological and cultural
19 resources would be protected, while also protecting the
20 public and the environment.

21 I'd like to talk in more detail about the
22 difference between alternatives in terms of soil volumes
23 proposed for removal. As I mentioned on the last slide,
24 the Conservation of Natural Resources alternative
25 approaches cleanup using a risk-based analysis. A

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 document called the "Standardized Risk Assessment
2 Methodology" was approved by DTSC to serve as the
3 technical basis for conducting human health and
4 ecological risk assessments for cleanup on other
5 contaminated land at the Santa Susana Field Laboratory.
6 This methodology establishes a cleanup threshold for
7 cancer causing chemicals based on ensuring that
8 remaining contaminant concentrations result in less than
9 one additional cancer case per one million people. It
10 also establishes a cleanup for non-cancer causing
11 chemicals based on a level that is considered non-toxic.
12 More information on this can be found in Appendix J of
13 the Draft EIS.

14 Under the Administrative Order on Consent
15 Cleanup, soil represented by all colors of trucks as
16 depicted on this slide would be removed. The Draft EIS
17 analyzes -- analysis uses the most currently approved
18 version of the Standardized Risk Assessment Methodology,
19 to assess the soil condition on the DOE controlled
20 portion of the property. This partial red truck --
21 thank you -- this partial red truck represents the soil
22 that exceeds the Administrative Order on Consent Look-
23 Up Table Values for radionuclides only. The yellow or
24 orange trucks represent soil that would be removed
25 because chemicals exceed a risk threshold using the

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 methodology described in the Standardized Risk
 2 Assessment Methodology. As you can see, these soils are
 3 removed under all three action alternatives. This
 4 removal would reduce the risk to human health from any
 5 remaining soil contamination to less than one cancer
 6 incidence per one million people. It also ensures that
 7 remaining chemical levels were not toxic in accordance
 8 with the methodology.

9 The blue trucks represent the volume of soil
 10 that would be removed using revised look-up table values
 11 for chemicals as described in the previous slide and AOC
 12 Look-Up Table Values for radionuclides. The green
 13 trucks represent 741,000 cubic yards of soil that would
 14 be removed because they exceed the Administrative Order
 15 on Consent Look-Up Table Values for chemicals alone.

16 The largest reduction in risk to a future
 17 on-site user comes from removal of the soil represented
 18 by the red and yellow/orange trucks. There would be an
 19 additional reduction in risk from the removal of soil
 20 represented by the blue trucks. There is a much smaller
 21 .3 percent reduction in risk from the removal of the
 22 soil represented by the green trucks. All of these soil
 23 removals have potential associated impacts relative to
 24 dust, and vehicle emissions, truck traffic, road
 25 deterioration, vehicle accidents, facilities and worker

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 injuries, as well as potential impacts to cultural and
2 ecological resources that increase proportionately to
3 the amount of soil removed.

4 For a more detailed discussion of this
5 information, you can refer to Chapter 4 and Appendix J
6 of the Draft EIS.

7 This slide shows the alternatives for
8 groundwater remediation. Through extensive
9 characterization efforts, we are confident that
10 groundwater contamination remains on site for DOE's
11 responsibilities. However, we know that it is important
12 to develop a plan to address groundwater contamination.
13 The Draft EIS analyzes a no action alternative, as
14 required. It also analyzes active treatment
15 technologies and monitored natural attenuation, which
16 means natural processes that decay and degrade materials
17 over time.

18 Finally, this slide outlines the building
19 remediation options. As we mentioned earlier, only 18
20 buildings remain on the site. The Draft EIS proposes
21 only two alternatives relative to these buildings: a
22 baseline no action alternative, similar to what we've
23 described above, or complete removal of the remaining
24 structures.

25 Collectively, the Draft EIS analyzes the

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 environmental and community impact of remediation
 2 options, including preservation of historic and cultural
 3 resources, wildlife conservation, impact on roads and
 4 local communities, and length of cleanup, among many
 5 other factors. Every DOE Environmental Impact Statement
 6 must consider the resource areas listed on this slide.
 7 As with any project of this size, there are complex
 8 factors that go into the decision-making process. The
 9 final decision will have to balance many factors.

10 With that overview of the Draft EIS, I want to
 11 briefly recap next steps. The 60-day public comment
 12 period started on January 13, which means interested
 13 parties have until March 14 to provide comments. This
 14 can be done at hearings like this or through our website
 15 at www.SSFLAreaIVEIS.com. Public input is an important
 16 part of shaping the Final EIS and eventually the path
 17 forward.

18 Once the Final EIS is complete, DOE will
 19 publicly release all of the comments that we received
 20 and our responses to those comments. We also will
 21 publish a notice of the EIS's completion in the Federal
 22 Register. The final step will be to publish a Record of
 23 Decision no sooner than 30 days after the Final EIS is
 24 made publicly available.

25 With that, I would like to turn the podium

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 over to Wendy so she can hear -- we can hear your
2 comments.

3 MS. LOWE: Thanks, John and Stephe.

4 As the moderator, it's my job to make
5 sure that everyone who wants to speak is provided a
6 respectful opportunity to do so. So, please understand
7 that DOE will not be responding directly to any comments
8 during the rest of this meeting; however, your comments
9 will be considered in the finalization of the
10 Environmental Impact Statement. All comments will be
11 given equal consideration whether they're submitted
12 orally or in writing. I think most of you had the
13 opportunity to attend the open house which preceded this
14 meeting, and if you did that, I want -- I want you to be
15 aware that any discussions that you had at the posters
16 were not recorded and will not be included in the formal
17 record of this meeting. If you said something in the
18 open house that you want DOE to consider when they're
19 finalizing the Environmental Impact Statement, please
20 restate your thoughts early -- the thoughts that you
21 expressed earlier either at the -- well, when you
22 provide your comments today or in writing.

23 I'd like to emphasize that providing oral
24 comments is only one of the ways that you can submit
25 your comments during the public comment period. If you

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 prepared written comments that you would like to submit
2 for the record today, you're welcome to leave those with
3 us before you leave. There's also a public comment form
4 that's available at the public comment table, and you
5 can fill out that form and leave it before you leave
6 today. There's also information at the registration
7 table about how you can submit your comments later in
8 writing. So, all comments that are received during the
9 public comment period, which will end on March 14, 2017,
10 will be given equal consideration.

11 All comments received during the public
12 comment period will be included in the Final
13 Environmental Impact Statement. If you are not already
14 on the mailing list, you can have the opportunity to
15 sign up to be on the mailing list at the registration
16 table. And those folks that are on the mailing list
17 will be notified when the final EIS is published.

18 Let's see. Phillip Orr, who is sitting here,
19 is our court reporter, and it's his job to provide a
20 complete and accurate transcription of this hearing.
21 I've asked him to let us know you if he's having trouble
22 hearing or understanding you. If people on this side of
23 the room want to make comments, we'd like to ask you to
24 go to the back side of the room when making your
25 comments so that he can have some visual contact so he

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 can see you while you're making your comments. So, if
2 you'd like to make a comment, we'd like you to begin by
3 stating your name and the name of any organization that
4 you're representing in an official capacity today.

5 And one final request I'd like to make of you:

6 I know some of you have strong opinions about the
7 cleanup effort -- cleanup program at Santa Susana Field
8 Laboratory. The point of a public comment hearing is to
9 provide you with the opportunity to provide your
10 thoughts to the Department of Energy about the Draft
11 Environmental Impact Statement. We're grateful that you
12 have taken time out of your busy schedules and driven
13 through the rain to attend this public meeting and for
14 your ongoing interest in the cleanup of Santa Susana
15 Field Lab.

16 Regardless of your position, I would
17 appreciate your help in making sure that everyone who
18 speaks today is treated with respect, as I know you will
19 appreciate when it's your turn to speak.

20 So, it is my understanding that only one of
21 you have actually signed up to speak, but we are
22 prepared to take comments from anyone who would like to
23 provide comments today.

24 So, Mr. Stickel, I understand you registered
25 to speak. Would you like to go first?

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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 MR. STICKEL: Yeah. I'm the only one?

2 MS. LOWE: I'm not sure you're the only one, but I

3 want to check -- check the box on the card. So, we're

4 going to move the chair over here so that --

5 MR. STICKEL: That's the hot seat, huh?

6 MS. LOWE: Yeah. You can stand or sit. It's up to

7 you. So, let the record reflect this is Gary Stickel.

8 MR. STICKEL: Yeah. I represent the Gabrieleno

9 Band of Mission Indians Kizh Nation, spelled K-i-z-h.

10 And, I'm a little bit at a loss for words because you

11 went into a little more detail than, you know, I can

12 comment on. But, I guess I just want to reaffirm what

13 you already know and heard a lot, you know, that the

14 Santa Susana Field Laboratory area is considered very

15 sacred to the Kizh, and not only the most prominent side

16 of Burro Flats, but there's other -- many other sites

17 that I think everybody here will agree that is sacred.

18 This is sacred landscape. It has to be viewed that way.

19 So, it's not just an individual little dot on a map, but

20 it's -- it's sacred area.

21 And, you know, I do -- I do appreciate the

22 government outreach to Native American people and

23 participation has been deeply appreciated. And, you

24 know, we want to continue with the process, and I

25 haven't fully reviewed the EIS, you know, but I will be



800-1

800-1

DOE recognizes and takes seriously the sacred status of SSFL, as discussed in Chapter 3, Section 3.11.2.3.4 and elsewhere throughout Section 3.11, and also as reflected in the effects analysis in Chapter 4, specifically under each alternative in Section 4.11.

800-2

800-2

Thank you for comment; outreach to Native Americans is an important part of DOE's EIS process.

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 taking a hard copy home today. I understand it's a
2 possibility and I'd like to do that and allow myself
3 some time to go over this. I missed the last meeting,
4 and I'm sorry about that. I had a major conflict, but,
5 you know, I was sick with pneumonia. That's my excuse.
6 So, but, anyway, that's -- that's basically all I have
7 to say right now. Thank you.

8 MS. LOWE: Well, thank you, Mr. Strickel, and
9 please take advantage of the 60-day comment period.

10 MR. STICKEL: Right.

11 MS. LOWE: Thank you. Patrick? This is Patrick
12 Tumamait.

13 THE REPORTER: Patrick.

14 MR. TUMAMAIT: Good morning. My name is Patrick
15 Tumamait. I represent the Barbareno Ventureno Band of
16 Mission Indians. Just -- just a few things. And, I've
17 kind of learned a little bit more about what's going on
18 here. But, in the past, it's been brought up that we
19 would like to see some type of overlay in our
20 circumstances of the contaminated areas that are going
21 to be removed versus the archaeological sites that have
22 been discovered here on the site. So, I'm requesting
23 that today is to have some kind of overlay of a mapping
24 situation where we can kind of see exactly where the
25 most effective areas are going to be when it concerns

801-1

801-1 Archaeological location information is maintained as confidential in order to protect the integrity of archaeological sites, and is not available to the public. This information has been presented to the Native American consulting parties (e.g, the Santa Susana Field Laboratory Sacred Sites Council (SSFL Sacred Sites Council), an organization of Native Americans with historical ties to SSFL land). These consulting parties were required to sign a non-disclosure agreement with DOE before being given access to this information.

In accordance with the NHPA, Section 106 Programmatic Agreement (being developed in consultation with the SHPO and other consulting parties, including the federally recognized Santa Ynez Band of Chumash Indians and non-federally recognized tribes, and DTSC), DOE will share additional information as cleanup plans are developed. The Soil Remedial Action Implementation Plans will identify specific areas and methods of remediation. This information will be shared with the Native American consulting parties, giving them an opportunity to see exactly where cleanup will occur in relationship to identified traditional cultural resources.

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 the archaeological sites.

2 Also, too, in your -- in your -- four group

3 levels of cleanup, you know, I kind of feel and think

4 that the general publics are going to want to go with

5 the most effective, you know, removal tier on site, and

6 I can see where there's, you know, other determinations

7 that they -- you may not have to go to the lowest.

8 But, I asked also in the past that, is there

9 going to be testing during the removal to see just how

10 much contamination exists during that excavation work?

11 I mean, is there going to be soil samples taken out of

12 the material that's being excavated as they go so to

13 determine whether there's anything left behind or if

14 there needs to be more or so on and so forth? So, are

15 you going to have other environmental companies out

16 there, you know, testing for soil samples?

17 Also, too, usually in a lot of construction

18 sites, you know, the bill -- and I've seen it where

19 companies will start at one -- at one end of the

20 project; before they finish, they'll move on to another.

21 Well, I hope in this circumstance that they start in one

22 area, complete it, and then move on to the next.

23 Because with the animal situation, you're going to be

24 displacing a lot of the animals, and in that one

25 particular area, where they're going to end up going is

|| 801-1
cont'd

|| 801-2

|| 801-3

|| 801-4

801-2 Please refer to Section 2.1, "Preferences for Cleanup," of this CRD, for a description of the alternatives evaluated in this EIS.

801-3 Testing of remaining soil after contaminated soil has been removed will be performed to confirm that cleanup standards have been met. The process for soil testing will be described in the Soil Remedial Action Implementation Plans.

801-4 DOE acknowledges your concern for wildlife. A biologist will be on staff during the remediation to ensure minimal wildlife disturbance. The potential impacts on biological resources during Area IV and NBZ remediation are evaluated in Chapter 4, Section 4.5 of this EIS; cumulative impacts on biological resources by the combined remediation activities by DOE, NASA, and Boeing are evaluated in Chapter 5, Section 5.5.5.

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 to where there's no noises, no equipment, there's
2 nothing going -- no action going on. But if the
3 contractor decides to move on or things change within
4 the project, then they start affecting another area,
5 then you've got this whole layout of equipment then
6 that's going to affect the migration for the habitat --
7 (Interruption and noise in adjacent room)
8 MR. TUMAMAIT: -- or the habitat of the -- of the
9 animals in a larger portion of the project. So, what I
10 would like to see, if it gets started in one particular
11 area, that it gets completed and -- and so on before
12 they move on to another area. That way it gets --
13 (Interruption and noise in adjacent room)
14 MR. TUMAMAIT: -- the animals -- so on -- because
15 they're going to -- because they're going to end up
16 going to wherever's safe, and, you know, by that time,
17 you know, hopefully they'll -- because they're --
18 they're going to return. They're going to be -- going
19 to return.
20 Also, too, the -- the idea of the trucking and
21 the costs and the construction companies are going to be
22 involved with this, you know, there's going to be a big
23 cost effect on, you know, the company that you're going
24 to hire because not everything is -- not everything goes
25 well on the ground with companies that have equipment.

801-4
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801-5

801-5 Your concern for safety and costs during remediation activities is noted. DOE will put protocols in effect to ensure safety and appropriate maintenance of equipment. DOE is committed to using green cleanup processes to the extent feasible in all aspects of remediation (see Chapter 2, Section 2.2.2, and Chapter 7 of this EIS). Many of these principles are and will continue to be incorporated into the remediation work at SSFL to ensure safety and efficiency while minimizing impacts to the environment.

3-1465

Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 A lot of times there's people who are sick or people
 2 that are -- equipment that's breaking down and so on, so
 3 that's going to prolong the costs, and it's going to get
 4 even greater at that time. So, hopefully you're going
 5 to take that into consideration when you do hire these
 6 companies, that they -- all of their equipment is, you
 7 know, inspected, their -- their drivers are -- you know,
 8 are approved drivers, so on and so forth. So, hopefully
 9 that alleviates some of that. That's all.

10 MS. LOWE: Thank you, Mr. Tumamait. Would other
 11 folks like to make comments on the record?

12 MR. COHEN: They would might say where to read.

13 MS. LOWE: Okay. This is Sam Cohen.

14 THE REPORTER: Sam Cohen?

15 MS. LOWE: Uh-huh.

16 MR. COHEN: Good morning. My name is Sam Cohen.
 17 I'm the government affairs legal officer for the Santa
 18 Ynez Band of the Chumash Indians. I have two verbal
 19 comments today and will be providing additional comments
 20 in writing before the end of the comment period. And, I
 21 may, if I have the time and the interest, go to some
 22 other public meetings, if I am brave.

23 So, two major comments for this morning: The
 24 first one is there are major areas, starting on Figure
 25 S-5 on Page S-22 of combined proposed biological and

801-5
cont'd

802-1

802-1 Because of the sensitive and confidential nature of archaeological site location information, DOE will not provide this data in this Final EIS. However, it was made available to members of the Sacred Sites Council who signed a non-disclosure agreement and attended a tour designed specifically to address this concern. Qualified members of the public and non-tribal consulting parties may obtain this information at the South Central Coastal Information Center of the California Historical Resources Information System. DOE's definition of cultural resources considered for exemptions under the AOC is discussed Chapter 4, Section 4.11.

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 cultural exemption areas. This shows up in three maps.
2 The second one is Figure S-7 on Page S-35. And, I
3 skipped over a third map, which is Figure S-6 on Page
4 S-32, all of which are in the Summary volume of the
5 Draft EIS. So, for the purposes of the Native American
6 participants, and the Santa Ynez Band of Chumash Indians
7 specifically, we would like a separation of the cultural
8 exemption areas from the biological exemption areas and
9 a more detailed explanation of both the cultural areas
10 and the biological areas.

11 The second item which we'd like to address is
12 wildlife corridors that surround the entire Santa Susana
13 Field Laboratory site and permeate the individual areas
14 within the Santa Ynez Band -- sorry -- within the Santa
15 Susana Field Lab site, including Area IV, which is the
16 area being analyzed by the DOE Draft Environmental
17 Impact Statement. There's been a lot of work on
18 wildlife corridors and how many animals, including
19 mountain lions, pass through this area on a regular
20 basis, and I think that needs to be added to the stuff.

21 Thank you very much.

22 MS. LOWE: Thank you, Mr. Cohen. Are there
23 additional folks that would be interested in commenting
24 today? Okay.

25 On behalf of the US Department of Energy, I

802-1
cont'd

802-2

802-2

Additional information about the wildlife corridors in relation to Area IV and the NBZ has been added to Chapter 3, Section 3.5 of this EIS.

Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

1 want to thank you very much for your time and attention.
 2 Let the record reflect that it is now 11:02 a.m., and
 3 all individuals who are interested in speaking have been
 4 provided an opportunity to do that. The project team
 5 looks forward to working with you throughout this
 6 process. I would like to remind you that you can submit
 7 comments in writing between now and March 14th, 2017.
 8 Thank you so much for coming today.
 9 (Whereupon, the Tribal Hearing adjourned
 10 at 11:02 a.m.)
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Comments from the Simi Valley, California Tribal Meeting (February 17, 2017)

REPORTER'S CERTIFICATION

I, PHILLIP DEAN ORR, C.S.R. No. 7656, Certified
Shorthand Reporter, certify:

That the foregoing proceedings were taken
before me at the time and place therein set forth.

That the proceedings were recorded stenographically
by me and were thereafter transcribed;

That the foregoing is a true and correct transcript
of my shorthand notes so taken.

I further certify that I am not a relative or
employee of any of the parties, nor financially
interested in the action.

I declare under the penalty of perjury under
the laws of the State of California that the
foregoing is true and correct.

Dated this 5th day of March, 2017.

PHILLIP DEAN ORR, C.S.R. No. 7656

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3-1470

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

2
3
4 PUBLIC HEARING RE:
5 DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
6 REMEDIATION OF AREA IV AND THE
7 NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD
8 LABORATORY
9
10
11
12
13 SATURDAY, FEBRUARY 18, 2017
14 GRAND VISTA HOTEL-VALLEY BALLROOM
15 999 ENCHANTED WAY
16 SIMI VALLEY, CALIFORNIA 93062
17 9:30 A.M.
18
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20
21
22
23
24 REPORTED BY: PHILLIP DEAN ORR, CSR NO. 7656
25
26 FILE NO. : 148217
27

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Final Environmental Impact Statement for Remediation of Area IV and the Northern Buffer Zone of the Santa Susana Field Laboratory

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Saturday, February 18, 2017, Simi Valley, CA, 9:30 a.m.

2 * * * * *

3 MS. LOWE: So, good morning everyone.

4 MR. UNIDENTIFIED: Morning.

5 MS. LOWE: And, thank you so much for coming today.

6 My name is Wendy Lowe, and I'd like to welcome you to

7 this public hearing, which is hosted by the U.S.

8 Department of Energy. DOE has prepared a Draft

9 Environmental Impact Statement, or EIS, to evaluate the

10 potential environmental impacts associated with cleanup

11 of Area IV and the Northern Buffer Zone at the Santa

12 Susana Field Laboratory. The goal of this public

13 hearing is to provide you, as members of the public,

14 with an opportunity to provide your comments on the

15 draft document for consideration by the Department of

16 Energy as the Department finalizes the Environmental

17 Impact Statement.

18 Today is Saturday, February 18, 2017, and this

19 meeting is being convened in the Valley Ballroom at the

20 Grand Vista Hotel, located at 999 Enchanted Way in Simi

21 Valley, California, and the time is now 9:31.

22 I would like to point out a few housekeeping

23 items before we get started. The restrooms are located

24 at these doors. Take a left, take a right, and then

25 they're on the right. And, we have water available at a

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 water station on -- back along this wall. The exists in
2 the event of an emergency, there's one exit that goes
3 through the kitchen that way. I would recommend these
4 three exists and then out the same way that you came in.
5 Feel free to leave this hearing room at any
6 time, but we'd ask that if you do so, you do it in a way
7 that minimizes distraction. Please silence your cell
8 phones and refrain from any conversations in this room.
9 Before we begin, I would like to introduce
10 John Jones and Stephe Jennings from the U.S. Department
11 of Energy. They will provide an overview presentation
12 about the Draft EIS. Copies of the slides that John and
13 Stephe use for their presentation will be available on
14 line after Tuesday. And, there are hard copies
15 available in the back of the room. After their
16 presentation, I will review the ground rules for this
17 hearing and begin taking your comments.
18 Speaking first will be John Jones. He's been
19 the Director of the U.S. Department of Energy's Energy
20 Technology Engineering Center since 2011, and he has the
21 overall responsibility for completing remediation at the
22 site.
23 MR. JONES: Thank you, Wendy. Thank you, Wendy,
24 and good morning. My name is John Jones, and as Wendy
25 stated, I am the Director for the U.S. Department of

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Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Energy's Energy Technology Engineering Center or ETEC.
 2 On behalf of DOE, I would like to welcome you to this
 3 public hearing. As Wendy mentioned, our purpose this
 4 morning is to gather your input on the Department's
 5 recently released Draft Environmental Impact Statement
 6 for Area IV and the Northern Buffer Zone. We would like
 7 to give you more background about the Draft EIS and a
 8 brief history of operations at the site in a moment.

9 I would like to first introduce my colleague
 10 Stephie Jennings, who is the deputy director at our site
 11 and will serve as the official hearing officer for this
 12 morning's hearing. In addition, I would like to thank
 13 Simi Valley's funds. Thank you for attending this
 14 meeting. They're here to insure that everybody is
 15 comfortable and safe to provide your comments, and we
 16 appreciate you here.

17 A little history on the site. After World War
 18 II, the U.S. Government was interested in developing
 19 peaceful purposes for atomic energy. In 1953, the
 20 government approved a nuclear research and development
 21 center in Area IV of the Santa Susana Field Lab,
 22 eventually being known as ETEC. During its operation
 23 years, the center housed and tested a number of small
 24 research reactors. Research also explored best
 25 practices in nuclear waste management and the use of

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 liquid metals as a coolant for nuclear energy.
2 The research at this site was critical in
3 developing our modern nuclear energy program that today
4 helps power everything from the space program to
5 electricity generation from commercial nuclear reactors.
6 This research resulted in localized releases of
7 chemicals and radionuclides to the soil, bedrock, and
8 groundwater. The Draft EIS lays out a range of
9 alternatives to address contaminations that remain at
10 Area IV and the Northern Buffer Zone.
11 I want to speak briefly about our path so far.
12 In 2003, DOE released an environmental assessment for
13 Area IV and the Northern Buffer Zone following an
14 internal review of remediation needs at the site. After
15 a court challenged this assessment, in 2007 a federal
16 judge ordered DOE to complete an Environmental Impact
17 Statement per the National Environmental Policy Act,
18 NEPA. The order enjoined DOE from relinquishing control
19 of any portion of Area IV until DOE had completed an
20 Environmental Impact Statement and issued a Record of
21 Decision as required by NEPA. Based on that finding,
22 the court chose not to address the plaintiff's claims
23 related to the Comprehensive Environmental Response,
24 Compensation, and Liability Act, CERCLA, and the
25 Endangered Species Act, ESA. As a result of this order,

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 DOE began the EIS process including extensive research,
 2 planning and public involvement. DOE initiated a
 3 significant characterization effort from multiple
 4 agencies, including California Department of Toxic
 5 Substances Control, or DTSC, and the universities as
 6 well. DOE provided \$41.5 million in funding to the
 7 Environmental Protection Agency to perform a thorough
 8 radiological study of the site. The EPA concluded this
 9 was one of the most comprehensive technical evaluations
 10 for low-level radiological contamination the agency had
 11 ever conducted. This study, along with the chemical
 12 studies performed by DOE and DTS -- with DTSC oversight,
 13 included more than 10,000 samples, as well as the
 14 installation of additional groundwater sampling wells
 15 and analysis for groundwater sampling results. The
 16 Draft EIS is the culmination of a careful study by
 17 environmental and technical experts.

18 Throughout this process, DOE has made a
 19 significant effort to be transparent and involve many
 20 partners, including the community in the important
 21 studies that were completed. Community involvement
 22 programs have included a workshop about the accident
 23 that occurred in 1959 at the Sodium Reactor Experiment,
 24 Groundwater University workshops, the Soil Treatability
 25 Investigative Group, and Community Workshops to Develop

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Alternatives.

2 Now I would like to ask Stepheie Jennings, the
3 hearing officer for this meeting, to discuss the NEPA
4 public involvement process, and provide more information
5 about the Draft EIS. Stepheie.

6 MS. JENNINGS: Much shorter. Thanks, John, and
7 good morning everyone. The National Environmental
8 Policy Act, often called NEPA, is a law that designates
9 a process that federal agencies must follow to consider
10 the environmental effects of a project. In our case,
11 the project involves remediation of Area IV and the
12 Northern Buffer Zone. Under NEPA, federal agencies are
13 required to assess and disclose environmental effects of
14 a reasonable range of alternatives and present them to
15 the public in a Draft Environmental Impact Statement.
16 The analysis of alternatives in the Draft EIS is the
17 heart of the federal environmental review process,
18 enabling the public to better understand the complexity
19 and trade-offs that will be involved in cleaning up the
20 site.

21 The process began with a Notice of Intent to
22 Prepare the Environmental Impact Statement followed by
23 initial scoping and public comment period. Since that
24 time, DOE has extensively studied and analyzed the site,
25 resulting in the Draft EIS, which was published on

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 January 13th, 2017. There is a 60-day public comment
 2 period which will end on March 14th, 2017. At the end
 3 of the public comment period, DOE will review all public
 4 comments, make changes as appropriate, and published a
 5 Final Environmental Impact Statement. Following the
 6 Final Environmental Impact Statement, DOE will issue a
 7 Record of Decision for cleanup at the site.

8 The Draft EIS analyzes the environmental
 9 consequences of the Administrative Order on Consent or
 10 AOC agreement and other alternatives that consider risk
 11 to human health, and the protection of natural resources
 12 to determine cleanup levels. This approach is
 13 consistent with cleanup actions at other DOE sites and
 14 is in compliance with federal law. The comparative
 15 analysis of these alternatives allows stakeholders to
 16 understand the balance and trade-offs associated with
 17 the various options for site cleanup.

18 DOE remains committed to a site cleanup that
 19 is protective of the public and the environment. The
 20 Purpose and Need Statement you see on this screen is
 21 also in the EIS and represents a summary of why we're
 22 undertaking this process. In the Draft EIS, Area IV
 23 references the traditional area of operations, and the
 24 Northern Buffer Zone which includes 182 acres
 25 immediately adjacent to Area IV.

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 would be removed from the site, assuming that the
2 proposed cultural and biological exemptions are approved
3 by US Fish and Wildlife, California Department of Fish
4 and Wildlife, the State Historic Preservation Office,
5 and ultimately, DTSC. The planning estimate for soil
6 removal and backfill is approximately 115,000 truck
7 trips over at least a 10-year period.

8 Second is the Cleanup to Revised Look-Up Table
9 Values. Under this alternative, a revised set of look-
10 up table values would be established for chemicals.
11 Cleanup levels for radionuclides would remain the same
12 as those under the Cleanup to AOC Look-Up Table Values
13 Alternative. This Revised Look-Up Table would evaluate
14 a reduced list of chemicals. These are chemicals
15 believed to cause a concern for human health at the site
16 based on the extensive site studies that John mentioned
17 previously. If the soil in a particular area exceeded
18 the Revised Look-Up Table Value for any chemical or the
19 AOC Look-Up Table Value for a radionuclide, the soil
20 would be removed. Approximately 192,000 cubic yards of
21 soil would be removed under this alternative. The
22 planning estimate for soil removal and backfill is
23 approximately 23,800 truck trips over a two and a half
24 year period. Like the AOC alternative, biological and
25 cultural resources would be protected while still

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 planning estimate for soil removal and backfill is
 2 approximately 115,000 truck trips over at least a
 3 10-year period.

4 Second is the Cleanup to Revised Look-Up Table
 5 Values. Under this alternative, a revised set of look-
 6 up table values would be established for chemicals.
 7 Cleanup levels for radionuclides would remain the same
 8 as those under the Cleanup to Administrative Order on
 9 Consent Look-Up Table Values Alternative. This revised
 10 look-up table would evaluate a reduced list of
 11 chemicals. These are chemicals believed to cause a
 12 concern for human health at the site based on the
 13 extensive site studies that John mentioned previously.
 14 If the soil in a particular area exceeded the revised
 15 look-up table value for any chemical or the AOC Look-Up
 16 Table Value for a radionuclide, the soil would be
 17 removed. Approximately 192,000 cubic yards of soil
 18 would be removed under this alternative. The planning
 19 estimate for soil removal and backfill is approximately
 20 23,800 truck trips over a two and a half year period.
 21 Like the AOC alternative, biological and cultural
 22 resources would be protected, while also protecting the
 23 public and the environment.

24 Third is the Conservation of Natural
 25 Resources. This approaches cleanup using a risk-based

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 protecting the public and the environment.
2 Third is the Conservation of Natural
3 Resources. This approach -- this approaches cleanup
4 using a risk-based analysis which is consistent with DOE
5 sites, as well as Superfund sites across the country.
6 DOE would clean up soil to a level that would protect
7 human health by removing soil with concentrations of
8 chemicals or radionuclides that exceed criteria
9 established using a risk assessment process.
10 Concentrations of contamination would be averaged over a
11 defined risk assessment unit in accordance with standard
12 practice for cleanups across the country. This
13 alternative would reduce risk to the public and the
14 environment, yet conserve natural resources by
15 disturbing less land than the other alternatives,
16 thereby reducing the potential of impacting visual,
17 cultural, and biological, and water resources. An
18 estimated 148,000 cubic yards of soil would be removed
19 from the site within a two-year time frame. The
20 planning estimate for soil removal and backfill is
21 approximately 18,400 truck loads. Like the first two
22 alternatives, biological and cultural resources would be
23 protected, while also protecting the public and the
24 environment.
25 I'd like to talk in more detail about the

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 difference between alternatives in terms of soil volumes
 2 proposed for removal. As I mentioned on the last slide,
 3 the Conservation of Natural Resources alternative
 4 approaches cleanup using a risk-based analysis. A
 5 document called the "Standardized Risk Assessment
 6 Methodology" was approved by DTSC to serve as the
 7 technical basis for conducting human health and
 8 ecological risk assessments for cleanup on other
 9 contaminated land at the Santa Susana Field Laboratory.
 10 This methodology establishes a cleanup threshold for
 11 cancer causing chemicals based on ensuring that
 12 remaining contaminant concentrations result in less than
 13 one additional cancer case per 1,000,000 people. It
 14 also establishes a cleanup for non-cancer causing
 15 chemicals based on a level that is considered non-toxic.
 16 More information on this can be found in Appendix J of
 17 the Draft Environmental Impact Statement.

18 Under the Administrative Order on Consent Cleanup,
 19 soil represented by all colors of trucks as depicted on
 20 this slide would be removed. The Draft Environmental
 21 Impact Statement uses the most currently approved
 22 version of the Standardized Risk Assessment Methodology
 23 to assess the soil conditions on the DOE controlled
 24 portion of the property: This partial red truck
 25 represents the soil that exceeds the Administrative

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Order on Consent Look-Up Table Values for radionuclides
2 only. The yellow or orange trucks represent soil that
3 would be removed because chemicals exceed a risk
4 threshold using the methodology described in the
5 Standardized Risk Assessment Methodology. As you can
6 see, these soils are removed under all three action
7 alternatives. This removal would reduce the risk to
8 human health from any remaining soil contamination to
9 less than one cancer incidence per 1,000,000 people. It
10 also ensures that remaining chemical levels were not
11 toxic in accordance with the methodology.

12 The blue trucks represent the volume of soil
13 that would be removed using Revised Look-Up Table Values
14 for chemicals as described in the previous slide, an
15 Administrative Order on Consent Look-Up Table Values for
16 radionuclides. The green trucks represent 741,000 cubic
17 yards of soil that would be removed because they exceed
18 the AOC Look-Up Table Values for chemicals alone.

19 The largest reduction in risk to a future
20 on-site user comes from removal of the soil represented
21 by the red and yellow/orange trucks. There would be an
22 additional reduction in risk from removal of the soil
23 represented by the blue trucks. There is a much smaller
24 .3 percent reduction in risk from removal of the soil
25 represented by the green trucks. All of these soil

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 removals have potential associated impacts relative to
 2 dust and vehicle emissions, truck traffic, road
 3 deterioration, vehicle accidents, fatalities and worker
 4 injury, as well as potential impacts to cultural and
 5 ecological resources that increase proportionately to
 6 the amount of soil removed.

7 For a more detail discussion of this
 8 information, you can refer to Chapter 4 and Appendix J
 9 in the Draft EIS.

10 This slide shows the alternatives for
 11 groundwater remediation. Through extensive
 12 characterization efforts, we are confident that
 13 groundwater contamination remains on site for DOE's
 14 responsibilities. However, we know that it is important
 15 to develop a plan to address groundwater contamination.
 16 The Draft EIS analyzes a no action alternative, as
 17 required. It also analyzes active treatment
 18 technologies and monitored natural attenuation, which
 19 means natural processes that decay and degrade over
 20 time.

21 Finally, this slide outlines the building
 22 remediation options. As we mentioned earlier, only 18
 23 buildings remain on the site. The Draft EIS proposes
 24 only two alternatives relative to these buildings: a
 25 baseline no action alternative, similar to what we've

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 described above, or a complete removal of the remaining
2 building structures.

3 Collectively, the Draft EIS analyzes the
4 environmental and community impact of remediation
5 options, including preservation of historic and cultural
6 resources, wildlife conservation, impact on roads and
7 local communities, and length of cleanup, among many
8 other things. Every DOE Environmental Impact Statement
9 must consider the resource areas listed on this slide.
10 As with any project of this size, there are complex
11 factors that go into the decision-making process. The
12 final decision will have to balance many factors.

13 With that overview of the Draft Environmental
14 Impact Statement, I want to briefly recap next steps.
15 The 60-day public comment period started on January 13,
16 2017, which means interested parties have until March
17 14, 2017 to provide comments. This can be done at
18 hearings like this one or through our website at
19 www.SSFLAreaIVEIS.com. Public input is an important
20 part of shaping the Final EIS and eventually the path
21 forward.

22 Once the Final EIS is complete, DOE will
23 publicly release all of the comments that were received
24 and our responses to those comments. We also will
25 publish a notice of the EIS's completion in the Federal

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Register. The final step will be to publish a Record of
 2 Decision no sooner than 30 days after the Final EIS is
 3 made publicly available.

4 With that, I would like to turn the microphone
 5 back over to Wendy so we can hear your comments.

6 Thanks.

7 MS. LOWE: Thank you, John and Stephe.

8 As the moderator, it's my job to make sure
 9 that this meeting is conducted in a respectful manner
 10 and that as many people as possible have a fair
 11 opportunity to provide oral comments.

12 Please understand the DOE will not be
 13 responding directly to your comments during the rest of
 14 this meeting; however, your comments will be considered
 15 in the finalization of the Environmental Impact
 16 Statement. All comments will be given equal
 17 consideration, regardless of whether they are submitted
 18 orally or in writing.

19 Some of you may have had the opportunity to
 20 attend the open house which began at 9:00 a.m. this
 21 morning. If you didn't, I wanted to make sure that you
 22 know that the information provided in the open house
 23 will be posted on the EIS website, and hand-out copies
 24 of the posters in the open house will remain available
 25 until the meeting ends today. If you did attend the

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 open house, it is important for you to understand that
2 any conversations you had in that area will not -- were
3 not recorded and will not be included in the formal --
4 as formal comments. If you said something in the open
5 house that you want DOE to consider while finalizing the
6 EIS, please restate your thoughts either from a
7 microphone today or in writing.

8 I'd like to emphasize that providing oral
9 comments from the podium is only one of the ways that
10 you can submit comments during the public comment
11 period.

12 There is also a public comment form that looks
13 like this, and it's available on these two back tables
14 here, and you're welcome to fill one of those out. You
15 can leave comment forms and other written comments with
16 the staff at the registration table or at the comment
17 table today. (Indicating)

18 For information on how to submit written
19 comments after today's meeting that -- the information
20 about how to do that is available at the registration
21 table. All comments received during the public comment
22 period, again which will end on March 14, 2017, will be
23 given equal consideration.

24 All comments received during the public
25 comment period will be included in the Final

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1 Environmental Impact Statement. If you are not already
 2 on the mailing list, you can sign up to be added to that
 3 list at the registration table. Those people who are on
 4 the mailing list will be notified when the Final EIS is
 5 published.

6 If you're interested in providing comments
 7 today, you have to sign up to do that at the
 8 registration table, and there's a card that looks like
 9 this. And, if you indicate on that card that you would
 10 like to make comments today, they're bringing their
 11 cards -- those cards up to me. (Indicating)

12 Phillip Orr, who is sitting here at the front
 13 of the room, is our court reporter this evening -- or
 14 this morning, how about. It's Mr. Orr's job to provide
 15 a complete and accurate transcription of this hearing,
 16 and I've asked him to let me know if he is having
 17 trouble hearing or understanding you.

18 I would point out that there may be people in
 19 the room that are recording this meeting. Because this
 20 is a public meeting, there's nothing we can do to
 21 prevent that. But, we did want you to know that the
 22 only recording DOE is making is the transcription that's
 23 being prepared by the court reporter.

24 Now I will go over the ground rules for
 25 today's meeting:

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 To allow sufficient time for every -- to allow
2 time for everyone to speak, oral comments will be
3 limited to three minutes per speaker. All comments
4 provided by -- will be provided by individuals and no
5 one will be allowed to share their time with another
6 person. Each person will be allowed to speak only once.

7 We recognize that three minutes is a brief
8 amount of time, and strongly encourage folks to provide
9 more detailed comments in writing to ensure that all of
10 your thoughts, concerns, and suggestions can be fully
11 captured in the record.

12 I will hold up signs that look like this for
13 30 seconds, and this for time to stop to let you know
14 how -- how you are doing on your time. (Indicating)
15 If you are still speaking at the end of the three
16 minutes, I will ask you to conclude your remarks and
17 I'll call the next speaker to begin. Please understand
18 that if I do cut you off, it's because it's my job to
19 make sure that everyone who wants to speak today has an
20 opportunity to do that.

21 I will be calling on people in the same order
22 in which they signed up, and we will accommodate as many
23 people as we can until 12:00 noon, which is the time
24 that was advertised for this public hearing to end. I
25 will try to call two or three people at a time so you

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1 will have some warning when it's your turn to speak. We
 2 have two microphones. There's one over here and there's
 3 one in the middle of the room. So, when I call on your
 4 name, make your way forward to whichever microphone is
 5 your preference. When I call your name, please step
 6 forward to the microphone and speak clearly and directly
 7 into the microphone. Begin by stating your name and the
 8 name of any organization that you may be representing in
 9 an official capacity today. Your three minutes will
 10 begin at that time.

11 One final request that I would make of you
 12 today: I know some of you have strong opinions about
 13 the cleanup at Santa Susana Field Laboratory. The point
 14 of a public comment period meeting is to give you an
 15 opportunity to share your thoughts with DOE about the
 16 Draft Environmental Impact Statement. We are grateful
 17 that you have taken time out of your busy lives to
 18 attend this public meeting and for your ongoing interest
 19 in the cleanup at Santa Susana Field Lab.

20 Regardless of your position, I would be
 21 grateful for your help in making sure that everyone who
 22 speaks today is treated with respect, as I know you will
 23 appreciate it when it is your turn to speak.

24 Interruptions and outbursts will slow things down, and
 25 I will control the hearing process to make certain that

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 everyone who wants to provide their comments is able to
2 do that in a respectful setting. Profanity and yelling
3 will not be tolerated.

4 Obviously, any interruptions will slow the
5 process and ultimately limit the number of people that
6 will be allowed to speak.

7 So, with that, I will begin taking comments.

8 So, the first person registered is Ron Ziman,
9 and Ron will be followed by Tenna Takata, and then
10 Melissa Bumstead.

11 MR. ZIMAN: My name is Dr. Ronald Ziman. I am a --
12 the co-chairman of the CAG. However, I'm speaking as an
13 individual, but the opinions I have are not necessarily
14 those of the CAGs. And, I am also a resident of Bell
15 Canyon and stakeholder. Bell Canyon, for those of you
16 who are not aware, is directly adjacent to SSFL. It is
17 downstream. It has 90 percent of the runoff -- water
18 runoff from SSFL.

19 I feel that the Environmental Impact Report
20 has to take into account protection for the public, the
21 environment, and the taxpayer. I'm grateful to see that
22 there were risks discussed as required by state and
23 federal law in the Environmental Impact Statement,
24 because risk is really the issue related to the cleanup,
25 those presented from the site itself and those that are

900-1

900-1

Onsite disposal options were eliminated from analysis in this EIS because the 2010 AOC does not allow onsite burial or landfilling (excavating and burying) of contaminated debris or soil. Boeing owns the land in Area IV and the NBZ. DOE's intent is to complete its cleanup responsibilities, then relinquish the land to Boeing's control. DOE does not want any enduring responsibility for a landfill created on site.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 presented by the cleanup actions and how they will
 2 effect the surrounding communities. In that regard, I
 3 feel that, as is standard throughout the nation, onsite
 4 disposal should be considered within the alternatives to
 5 reduce the amount of soil that requires removal from the
 6 site.

7 There should also be consideration of
 8 alternative cleanup methods, again to reduce soil that
 9 has to leave the site via trucks to minimize those risks
 10 to the community, including such things as diesel
 11 pollution, which has been associated with increased
 12 incidences of stroke, heart disease, dementia, and
 13 cancer, to name a few. There are, of course, other
 14 risks associated with truck traffic beyond the diesel
 15 pollution itself.

16 Biological, cultural and historic resources
 17 should be preserved to the greatest degree as possible
 18 and should receive a high priority. Obviously, human
 19 health is the major priority, but preservation of these
 20 other resources, I believe, is critical for multiple
 21 reasons, including maintaining wildlife linkages.

22 Area averaging, which is standard in my
 23 opinion, should be applied rather than the
 24 point-by-point contamination assessment to, again, be
 25 consistent with whether it's national standards and also

900-1
cont'd

900-2

900-3

900-4

- 900-2 Please refer to Section 2.1, "Preferences for Cleanup," of this CRD, for a description of why DOE considered alternatives to the Cleanup to AOC LUT Values Alternative. The alternative cleanup methods would reduce the volumes of soil that must leave SSFL. The impacts from truck traffic for the various alternatives are summarized in Chapter 2, Table 2-9, of this EIS and described in more detail in Chapter 4, primarily in Sections 4.6 (Air Quality and Climate Change), 4.7 (Noise), 4.8 (Transportation and Traffic), 4.13 (Environmental Justice), and 4.14 (Sensitive-aged Populations).
- 900-3 DOE has presented measures that would avoid, minimize, rectify, reduce, eliminate, or compensate for potential adverse impacts on the environment. Minimization measures are inclusive of methods, procedures and protocols, design features, and best management practices aimed at reducing the environmental impact of project activities. This EIS includes a range of minimization measures, including those that reduce the environmental footprint; improve safety, efficiency, and sustainability; and are incorporated as part of the alternatives' design. Additional information on wildlife linkages is included in this Final EIS.
- 900-4 While the Cleanup to AOC LUT Values Alternative and the Cleanup to Revised LUT Values Alternative would apply cleanup criteria on a point-by-point basis, the Conservation of Natural Resources Alternative would apply a traditional risk-assessment approach to making cleanup decisions, including using area averaging to determine concentrations and developing risk and dose criteria. Prior to area averaging, "hot spots" with higher concentrations are identified and targeted for cleanup. Area averaging is then applied to the remaining soil to determine whether additional soil cleanup is needed.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 to reduce unnecessary removal of soils that don't --
2 that -- that are not required with regards to risk
3 assessment. The --
4 No backfill has been identified. This is
5 indicated in the report, and the fact of the matter is,
6 if we applied the same standards to the State of
7 California in general that are being applied to SSFL, I
8 think that it would require removal of most of the soil
9 from California and elsewhere and --
10 (Clock timer ringing)
11 MR. ZIMAN: -- this is -- shows how this overly
12 strict cleanup requirement really doesn't make any
13 sense.
14 MS. LOWE: Thank you, Mr. Ziman.
15 MR. ZIMAN: Thank you.
16 MS. LOWE: Teena Takata will be followed by Melissa
17 Bumstead, and then Alec Uzemeck.
18 MS. TAKATA: Good morning. I'm Tenna Takata. I
19 have lived in the west part of Chatsworth for the last
20 30 years. I'm the president of the Santa Susana
21 Mountain Park Association, and have been involved with
22 the neighborhood council for the last 10 years in
23 Chatsworth.
24 Thank you very much to the -- to the DOE for
25 providing an EIS with an extensive analysis of possible

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900-5

900-5

DOE did explore locations for backfill, including those DTSC used as clean sites to establish background. One would consider the background sites to be "reasonable" locations as they have "similar lithology and chemical makeup" as Area IV. But the soil cannot be used as backfill because 42 percent of the chemicals analyzed by DTSC for the identified background sites exceeded their AOC LUT value in at least one sample and at about 25 percent of the background points at which samples were taken at least one chemical exceeded its AOC LUT value.

900-6

900-6

DOE acknowledges your concern about application of an overly strict cleanup requirement. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 alternatives. I can't tell you how much that is
 2 appreciated, that you have actually looked at the
 3 alternatives that could occur.

4 I especially appreciate in that document the
 5 consideration and analysis of the difficulty of
 6 replacing the soils. Given that the long-term use of
 7 the property is anticipated to be open space under all
 8 commitments made by the owner of the land, which
 9 presently is Boeing, removal of soils with inadequate
 10 replacement creates a poor effect from both wildlife and
 11 plant habitat, as well as long-term aesthetic views that
 12 will be permanently affected by the cleanup. Various
 13 community impacts are greatly increased as the number of
 14 truck trips increase.

15 Given that all the alternatives provide a
 16 cleanup that is protective of human health, and the
 17 variation, cancer risk is similar for all methods. The
 18 smart answer for wildlife and neighboring communities is
 19 to reduce the impacts from the cleanup as much as
 20 possible; therefore, the Conservation of Natural
 21 Resources approach is the best alternative in my view.

22 And, my comments are mine, and our
 23 organizations will separately submit comment and their
 24 letters as time goes on.

25 Thank you.

901-1

901-1 Please refer to Section 2.3, "Suitable Backfill Soil," of this CRD, for further discussion of this topic.

901-2

901-2 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 MS. LOWE: Thank you. Melissa Bumstead will be
2 followed by Alex Uzemeck, and then Paul Poirier. I hope
3 I'm saying that properly.
4 MS. BUMSTEAD: I'm Melissa Bumstead. I'm a mom. I
5 live in West Hills. And, I'd like to --
6 MS. LOWE: Can you get closer to the microphone?
7 Can you? Thank you.
8 MS. BUMSTEAD: Thank you. This is my daughter
9 Grace. She was diagnosed with cancer three years ago
10 with an incredibly rare form of leukemia. I'd like to
11 introduce you to Hazel. She's from Simi Valley. She is
12 in Children's Hospital today, receiving chemotherapy to
13 save her life. She was diagnosed with neuroblastoma in
14 2013. This is Sofia. She's from Bell Canyon. She was
15 diagnosed with neuroblastoma in 2011, as she died a year
16 and a half after her treatment. This is Ballie.
17 She's from Chatsworth. She was also diagnosed with
18 neuroblastoma in 2014. She died at two years old. It's
19 hard for me because these are all the children that
20 we've mapped. These are children that I know personally
21 who have childhood cancer in our local area.(Indicating)
22 I appreciate that so much research has been
23 done. My problem is with the methodology itself. I
24 have spoken with Dr. Hal Morgenstern, who is one of the
25 primary epidemiologists who put together the report, and

902-1

902-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

902-2

902-2

DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 only a two-mile radius on adult cancer was researched.
 2 However, according to the National Cancer Institute,
 3 many studies have shown that exposure to Ion-19
 4 radiation could cause damage to the DNA, which could
 5 lead to the development of childhood leukemia and
 6 possibly other cancers, and I have -- I tried to get --
 7 I tried to get more information out of Dr. Morgenstern,
 8 to ask him, "Are -- are we safe in our community? Is
 9 this really a threat? Or am I overreacting?" He
 10 couldn't give me that answer. He was very nice but very
 11 firm, but he did not have the data available to assess
 12 any risks to children outside of that two-mile radius,
 13 and there's a -- there's a lot of complicating reasons
 14 for that, so I'm going to have to get you with the way
 15 the HIPAA laws are attributed, but he cannot compare our
 16 area to other local areas to see if we are above the
 17 national average. However, I would like to say that I'm
 18 not -- not -- I had 10 cases of childhood cancer that I
 19 think by the most compelling to say that more research
 20 needs to be done before we can move on to say that it is
 21 safe enough to limit the cleanup.

22 Neuroblastoma, those three cases that I just
 23 showed you, all those children live within a five-mile
 24 radius of the Santa Susana site. There are only 700
 25 cases nationally. So, if you put that over the

902-2
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Counties. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. DOE believes that all of the action alternatives evaluated in this EIS would result in cleanup of those areas of SSFL for which DOE is responsible, Area IV and the NBZ, that would be protective of human health and the environment.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 three-year range that those children were diagnosed,
2 there's only 2000 cases out of 73,000,000 children in
3 the United States who would get that disease. We have
4 three of them right here.
5 Brain tumors, there are only 5,000 cases of
6 pediatric brain tumors, and over two years, we had
7 Daniel pass away last year at DITG, inoperable,
8 untreatable brain cancers in the valley. Three years
9 ago we had Dillon with optic nerve glioma from West
10 Hills. We had Tyler from 2015, medulloblastoma brain
11 cancer from West Hills. Wendy, 2015, brain tumor,
12 Chatsworth. Right there we have four out of 5,000 cases
13 living very close. We have earliest tumors -
14 (Clock timer ringing)
15 MS. BUMSTEAD: -- known in 200 cases of that
16 nationally that --
17 (Clock timer ringing)
18 MS. LOWE: Ms. Bumstead, I'm sorry. You've run out
19 of time. Thank you so much.
20 MS. BUMSTEAD: I wish to leave you my map. Thank
21 you.
22 MS. LOWE: We appreciate you. (Clock timer ringing)
23 Okay. Stop. I'm sorry. Okay. Alec Uzemeck will be
24 followed by Paul Porier, and then Robert Dodge.
25 MR. UZEMECK: My name is Alec Uzemeck, and I'm a co

902-1
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3-1497

Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 chair of the SSFL Community Advisory Group, and I'm a
 2 member of the West Hills Neighborhood Council, but this
 3 morning I'm representing my own opinions.

4 I strongly support the Conservation of Natural
 5 Resources. This is a very good alternative that
 6 satisfies a number of laws and regulations. The fact
 7 that it's risk-based satisfies the National Contingency
 8 Plan and the California Health Act. The fact that it
 9 has alternative analysis satisfies NEPA. And the fact
 10 that it would use area averaging, it complies with U.S.
 11 EPA guidelines, and all of this was done in -- within
 12 the AOC framework. I congratulate you for that.

13 But it is clear that the present AOC as
 14 written doesn't satisfy any of those acts or regulations
 15 or procedures or in generally used processes, so it does
 16 need to be rewritten to accommodate this alternative.
 17 What we're concerned about as a committee -- community
 18 is that we have the lowest truck traffic going through
 19 the neighborhood in order to control traffic and
 20 pollution, and so this alternative fits that same --
 21 that desire.

22 We do need air sampling, but the air sampling
 23 that's called out in the EIS is more from the point of
 24 view of DOE, and I -- I would like to see air sampling
 25 that considers the health of individuals in the

903-1

903-1 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

903-2

As described in Chapter 3, Section 3.9.2 of the Draft EIS, DOE collects air samples and monitors ambient radiation at locations in and around Area IV and the NBZ. Air samplers run continuously and the filters are collected weekly for analysis. Offsite ambient radiation dosimeters are located at the SSFL Main Gate and at background locations in West Hills and West Lake Village. The ambient radiation dosimeters are collected for analysis quarterly. The results of the monitoring can be found in the Annual Site Environmental Reports, which can be found on the Energy Technology Engineering Center website.

With regard to non-radiological air monitoring DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is operating the system to establish a pre-remediation baseline. The system will continue to operate during remediation activities to monitor any potential air pollutant releases of concern. If the air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

903-2

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 community and perhaps some ongoing evaluation of any
2 peaks and types of illnesses.
3 That ends my comments. Thank you.
4 MS. LOWE: Thank you. Next is Paul Poirier,
5 followed by Robert Dodge, and then Kristi Storey, I
6 believe.
7 MR. POIRIER: Hi. Paul Poirier. I'm going to be
8 speaking to you on two -- representing two facts: One
9 is I'm the past president and current vice president of
10 Advocacy for the Central Coast Rebuilding Council, which
11 is a chapter of the U.S. Rebuilding Council, and that
12 organization is supporting compliance with the
13 Administrative Order on Consent of 2010 with the DOE,
14 just the bigger version to clean up. And, the reason
15 is, we feel that all of the short-term costs will be
16 more expensive, the long-term costs will be less
17 expensive. Much like fighting climate change and things
18 like that, right now it's containable. We can do that.
19 I think that if we take care of it now, we'll be taking
20 care of it forever. If we don't, we may have ongoing
21 problems and ongoing expenses that we'll have to deal
22 with as it migrates off the site.
23 A couple of comments regarding the study: You
24 could use reclaimed water for dust control as opposed to
25 potable water as a way to reduce the environmental

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904-1

904-2

- 904-1 DOE acknowledges your support for compliance with the AOC. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also refer to Sections 2.7, "Offsite Impacts," and 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Please also see Appendix K, Cost-Benefit Analysis of the Soil Remedial Alternatives, of this EIS.
- 904-2 DOE agrees that use of reclaimed water would be desirable for dust control. Chapter 7, Table 7-1, of this EIS, summarizes the applicability of greener cleanup using best management practices in DOE's remediation activities. In this table DOE addresses the potential for use of reclaimed water for such activities as dust control or wash water. Sources of water could include captured stormwater runoff or treated extracted groundwater. The use of captured stormwater runoff, however, would require coordination with the landowner (Boeing), and the use of treated extracted groundwater (a minor potential source of reclaimed water). That source would require approval by the State of California. DOE is not considering construction of a parallel reclaimed water distribution system for site reclamation activities because such a distribution system would need to pass through urbanized areas and then up the steep slope to SSFL, and it would potentially result in additional environmental impacts.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 impacts of the water, if need.

2 Also, regarding the CO2 generation, you can

3 include some kind of a solar array to offset the CO2

4 that will be generated by electricity, to offset the

5 land CO2 that all the additional truck trips will take

6 as well.

7 Now, speaking on behalf of a former resident

8 of the area that currently live in Santa Barbara,

9 California, but I spent the first 18 years of my life

10 living near the corner of Topanga and Vanowen, and then

11 later near Fallbrook and Roscoe, kind of in the fallout

12 area of the Santa Susana Lab. And, I would say

13 definitely going to school, there were a lot of kids

14 that had leukemia and exotic forms of cancer, even

15 though we were outside of the two-mile radius, going to

16 Our Lady of the Valley School and high school at

17 Chaminade High School, used to runaround the reservoir

18 all the time, running 10 miles to practice for cross

19 country.

20 And, right now, being 56, you know, people

21 from the graduating class of 1979 to 1980 who grew up in

22 that area now no longer live in the area. But, it seems

23 like every year one or two of them is dying of some form

24 of cancer, and it's kind of alarming. You know, people,

25 when I was a kid, dying of leukemia in grade school, and

904-2
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904-3

904-3

Thank you for your comment. While DOE does not propose any solar electrical generation as part of the proposed cleanup activities, they will consider opportunities in the future for onsite renewable energy generation and solar power for remote sensing instrumentation. DOE also will consider such opportunities in the scopes of work of contractors who bid on the proposed cleanup activities. For example, DOE could give preference to bids that demonstrate inclusion of renewable energy generation into the proposed remediation work.

904-4

904-4

DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 now a lot of people, let's say, two a year are passing
2 away locally. So maybe there's a way to reach out to
3 the local schools and the alumni associations and find
4 out who used to live in the area for an extended period
5 of time and who has passed away. Because there -- I can
6 go through a list of people who died of breast cancer,
7 the star football captain in the 1979 class of Chaminade
8 who just passed away two years ago, another buddy of
9 mine who served in the Marine Corp., he just passed away
10 last year. My high school girlfriend passed away last
11 year. I was married to her. I have a wife of my own
12 now. But, people are currently fighting breast cancer,
13 many women now, and it's -- it's alarming, and we -- we
14 just think that if you don't clean this site up as clean
15 as you can make it now, the price will be passed on from
16 the federal government to the individual people who have
17 to use their money to pay for the medical expenses to
18 treat the cancers and other things that they're going to
19 get, and it's a -- a fair way of spending the money now.

20 Granted, as a kid, we loved to look up and see
21 the rockets going off and smoke coming off the top of
22 the mountain when they had a missile test and feel the
23 ground shake. But, you know, really, you should clean
24 up the mess that -- that got us to the moon and gave us
25 military superiority. It's just all part of the

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 expense, and just passing it off to people's medical
 2 expenses, we don't think is right.

3 So, thank you very much. (Clock timer ringing)

4 MR. LOWE: Thank you, Mr. Poirier. Robert Dodge
 5 will be followed by Kristin Storey, and then Bonnie
 6 Klea.

7 MR. DODGE: My name is Robert Dodge. I'm a family
 8 physician practicing in Ventura. I'm also the president
 9 of Physicians for Social Responsibility Los Angeles.
 10 Thank you for having us here today.

11 I'm going to be reading an op ed that was
 12 published in this week's Star that I wrote:

13 "Our region has just been hit by two
 14 significant events that affect the health of our
 15 community.

16 While we have long awaited some relief for our
 17 drought, torrential rainstorms inundated the Santa
 18 Susana Field Lab, one of the most polluted places in our
 19 state. Runoff from far lesser storms in recent years
 20 has resulted in more than 200 instances in which highly
 21 toxic and radioactive contaminants migrated off site at
 22 levels in excess of state pollution limits, and one can
 23 only imagine the effect these recent large storms have
 24 had.

25 Around the same time, the Department of Energy

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905-1

905-2

905-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

905-2 Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a No Action Alternative in accordance with the requirements of NEPA, of this Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors (refer also to Section 2.5, "Toxicity of Soil Contaminants," of this CRD). Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to your concern about people in neighboring communities being at perpetual risk from migrating radioactivity and toxic chemicals, please refer to Section 2.7, "Offsite Impacts," and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for additional information. As discussed in these sections, Area IV is not currently spreading contamination to offsite areas, including offsite groundwater, and each of the alternatives evaluated in this EIS is protective of public health and safety and the environment both on and off the SSFL site.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 broke its solemn cleanup commitments and announced it
2 would leave as much as 99 percent of the soil
3 contaminated at the field lab site not cleaned up.
4 Unless people rise up and our elected officials act
5 strongly to enforce the promises, people in the
6 neighboring communities will be at the perpetual risk
7 from migrating radioactivity and toxic chemicals.

8 The field lab housed 10 nuclear reactors, of
9 which at least four suffered accidents, including a
10 partial nuclear meltdown in 1959. There was a factory
11 for fabricating reactor fuel rods out of plutonium,
12 which is perhaps the most deadly substance on our
13 planet. In a 'Hot Lab' there, highly irradiated nuclear
14 fuel rods shipped in from around the nation were cut
15 apart, releasing several radioactive impact fires.

16 It illegally burned radioactive and chemically
17 hazardous wastes in the open air pit, by shooting
18 barrels of waste with rifles to ignite them, with the
19 toxic plumes blown over surrounding communities. It
20 conducted tens of thousands of rocket tests, many using
21 very dangerous fuels, and then flushed out the engines
22 with a million gallons of toxic solvents that were
23 allowed to simply percolate into the soil and
24 groundwater.

25 The result of this shameful violation of basic

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905-3

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905-3 This EIS is being prepared to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Chapter 1, Section 1.3, of this EIS provides a history of the SSFL site that summarizes DOE's past activities in Area IV, including previous cleanup efforts. Additional information can be obtained from the DOE Energy Technology Engineering Center website (see <http://www.etec.energy.gov/>). Chapter 3, Sections 3.9.5 and 3.9.6, of this EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measurable release of radioactive material. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer.

Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the experts was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

With respect to the statements regarding burning radioactive and chemical waste in an open air pit, the Former Sodium Disposal Facility was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The facility was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). Additional information can be found at <http://www.etec.energy>.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 environment protections produced widespread
 2 contamination of groundwater, surface water and soil
 3 with strontium-90, cesium-137, plutonium-239,
 4 perchlorate, PCBs, dioxins, heavy metals, volatile
 5 organic compounds and more. And because the site sits
 6 in the hills overlooking more than 500,000 people within
 7 10 miles, the contamination wants to flow off site to
 8 places and people below.

9 The site has been fined more than \$1,000,000
 10 in recent years for allowing pollutants to migrate off
 11 the property at levels deemed unsafe for people or for
 12 the environment. And as long as the site doesn't get
 13 cleaned up, that will continue."

14 We'll have Kristin Storey continue.

15 MS. LOWE: Kristin Storey will be followed by
 16 Bonnie Klea, will be followed by Shel Plotkin.

17 MS. STOREY: My name is Kristin Jensen Storey. I'm
 18 an educator and resident of Ventura County.

19 "These awful materials cause cancers,
 20 including leukemia, genetic defects, neurological and
 21 developmental disorders and other health problems. A
 22 federally funded study by Dr. Hal Morgenstern of the
 23 University of Michigan found a greater than 60 percent
 24 increase in key cancers in people living near the site
 25 compared with people living farther away. Another

905-4
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906-2

gov/Operations/Support_Ops/FSDF.html. Rocket engine testing was a completely separate activity from the nuclear research DOE and its predecessor agencies conducted in Area IV; and was conducted in locations other than and physically separated from Area IV, by entities other than DOE. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, please see Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in compliance with regulatory requirements, including regulations, orders, and agreements.

905-4 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

906-1 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of illnesses in the vicinity of SSFL, including author-acknowledged limitations of past studies. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 government-funded study by a team from UCLA led by
2 Dr. Yoram Cohen concluded that numerous pollutants from
3 the site had migrated off site at levels in excess of
4 EPA levels of concern.
5 For these reasons, the community was joyous in
6 2010 when the Department of Energy and NASA signed a
7 legally binding agreement -- legally binding agreements
8 with the California Department of Toxic Substances
9 Control requiring all contamination that could be
10 detected in the soil to be cleaned up by 2017.
11 It is now 2017 and the cleanup hasn't even
12 begun. And the DOE just issued a Draft Environmental
13 Impact Statement breaking the 2010 cleanup agreement and
14 saying it will only consider three options, none of
15 which comply with its past commitments.
16 One would leave 39 percent of the
17 contamination in place. A second would leave 91
18 percent. And the third would walk away from a
19 staggering 99 percent of the contaminated soil, just
20 leaving it in place. The 2010 agreement barred any
21 consideration of leave-in-place alternatives.
22 The DOE has essentially thumbed its nose at
23 California. Even if the cleanup agreement didn't exist,
24 the decision on how much toxic pollution to clean up
25 doesn't rest with the polluter, but with the state

906-2
cont'd

906-3

906-4

906-2 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts. As described in Section 2.7, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

Dr. Cohen's report merely determined areas of potential exposure concern due to data limitations and expressed data needs and future monitoring need.

906-3 Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of this topic and DOE's response. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

As discussed in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a No Action Alternative (required by NEPA), this EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. As discussed in Section 2.2, the alternatives

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1 regulator. The DOE can't decide to just walk away from
 2 most of the contamination.

3 But the state has been remarkably silent so
 4 far in response to this assault on its authority.
 5 Indeed, it has in its own actions undercut the cleanup
 6 agreement it signed. Toxic Substances Control is years
 7 late on its own environment impact report and has been
 8 busy undermining the cleanup in other ways as well.

9 In 2010, we were promised that, with a couple
 10 of narrow exceptions, all of the soil contamination that
 11 could be detected would be cleaned up. Now it appears
 12 likely that close to none will be, and the people in the
 13 area will continue to be the people with children who
 14 will continue to be at perpetual risk from migrating
 15 radioactive and toxic contamination unless they speak
 16 out now, loud and clear, and their elected
 17 representatives do the same."

18 I'm a teacher for a reason. I'm a mother.
 19 This isn't right. Thank you.

20 MS. LOWE: Thank you, Ms. Storey. Bonnie Klea will
 21 be next, followed by Shel Plotkin, and then Denise
 22 Duffield:

23 MS. KLEA: My name is Bonnie Klea. I'm a resident
 24 of West Hills. I worked up at Santa Susana in my young
 25 years, and I developed bladder cancer 20 years after I

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evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors (refer also to Section 2.5, "Toxicity of Soil Contaminants," of this CRD). Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of additional cleanup, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision (ROD) pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

906-4 DOE recognizes DTSC's authority over the cleanup. Chapter 1, Sections 1.3 and 1.4 of the Draft and Final EISs include discussion that acknowledges that cleanup of the site is governed by the 2007 Compliance Order and the 2010 AOC.

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and

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1 left. I got involved with a work group, started saving
2 their handouts. I had boxes of data. Then I started
3 getting phone calls from all the other workers. They
4 all had cancer, the same kind of cancer I had.
5 And, by 2000, the federal government took
6 responsibility for 350 companies in America that exposed
7 their workers to radionuclides and chemicals without
8 their permission, and then when they filed a lawsuit,
9 they sent federal lawyers in to help.
10 So, by 2006, I looked at the records. Only
11 two workers had been paid out of the thousands who were
12 trying to get compensated. And, there was one last
13 resort where you could file a special exposure covert
14 proposition, and I did that, and last Christmas we got
15 compensated for years up through 1988. So, all the
16 workers from Downey, Canoga, Desoto, and Santa Susana
17 who worked in the nuclear area will be compensated.
18 And, my only enemy was Boeing, the Boeing
19 Company. There was men on my work group, conversations
20 that came to the meetings I had with the federal
21 government. They wrote letters. They were the only
22 enemy that did not want -- want their workers to be
23 compensated.
24 And I've seen the toll in my neighborhood. My
25 community was built in 1959. On my street of 15 houses,

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consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a ROD(s) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

906-5 Thank you for your comment. The *Draft Program Environmental Impact Report for the SSFL, Ventura County, California* was issued by DTSC in September 2017 (DTSC 2017b). Because the comment/statement is not on the scope or content of this Final EIS, no further response is provided. It has been included in the Administrative Record for the EIS.

907-1 DOE refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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1 there were -- there were one or two cancers in every
 2 single house from the 1959 houses. I -- this is now the
 3 second mother -- young mother I've seen come forward
 4 with children who are all sick.

5 And, of course, we have the National Academy
 6 of Science, who studied Japan, and they found that women
 7 and children were 50 percent more at risk for cancer
 8 than the men.

9 And, I say, clean it up, clean it up, all of
 10 it, all that you can. And, it's not up to DOE and the
 11 neighborhood to make comments and pick out our -- our
 12 cleanup. It's up to the State of California and the
 13 EPA, DTSC from the state.

14 Anyway, thank you.

15 MS. LOWE: Thank you for coming. Shel Plotkin will
 16 be followed by Dennis -- excuse me -- Denise Duffield
 17 and Dawn Kowalski.

18 MR. PLOTKIN: I'm Sheldon Plotkin. I'm appearing
 19 here on behalf of Southern California Federation of
 20 Scientists, which has been involved for nearly 40 years
 21 trying to get the Department of Energy to take
 22 responsibility for the contamination that it created at
 23 Santa Susana and clean it up.

24 And, I'm deeply concerned the DOE is once
 25 again demonstrated that its word cannot be trusted and

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907-2 Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

907-3 This Final EIS addresses the impacts on offsite populations from the releases of radioactive and chemical contaminants into the air that could occur during site remediation activities. The analysis follows a standard risk assessment methodology that includes risk factors that account for gender and various ages.

907-4 DOE acknowledges your concern about cleanup of all of the site contamination. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

907-5 DOE recognizes DTSC's authority over the cleanup. Chapter 1, Sections 1.3 and 1.4 of the Draft and Final EISs include discussion that acknowledges that cleanup of the site is governed by the 2007 Compliance Order and the 2010 AOC.

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action.

This EIS analyzes an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels based on laboratory capabilities. In response to public input received, and consistent with its obligations under NEPA, DOE also analyzed alternatives that are based on risk to human health as well as the protection of natural resources. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives the public and DOE decision-makers to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ.

DOE will issue a Record(s) of Decision (ROD[s]) for this EIS no sooner than 30 days after the EPA Notice of Availability for this Final EIS is published in the *Federal Register*. The potential environmental impacts presented in this EIS, along with public

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1 that it has now broken the legally binding cleanup
2 agreement it signed in 2010. DOE and its predecessor
3 agency, the Atomic Energy Commission, historically acted
4 as if they were above the environmental laws of the
5 country and that applied to everyone else. They
6 consistently broke fundamental rules about protecting
7 the environment and ending up polluting the soil, water,
8 and the air at sources of nuclear facility -- at scores
9 of nuclear facilities around the country.
10 Santa Susana elementary safety rules were
11 ignored. Four different reactors suffered accidents.
12 In 1959, one reactor released radioactivity. A few
13 months later, a different reactor suffered a partial
14 meltdown in which a third of the fuel experienced
15 melting. Essential safety rules were simply ignored.
16 In that case, after an accident, which power ran out of
17 control exponentially and they could barely shut down
18 the -- the reactor, they inexplicably started it up
19 again a couple of hours later without having been able
20 to identify the cause of the problem. They ran -- they
21 ran it for another 10 days or so in the face of clear
22 evidence of a failing reactor, with radiation readings
23 so high that they were off scale, in other words,
24 radiation levels higher than the monitors could record.
25 Radioactive material was intentionally release -- was

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input, cost, policy, and other factors, will be considered by decision-makers in selecting alternatives for soil remediation, building demolition, and groundwater remediation.

As discussed in Chapter 1, Section 1.9.2, of this Final EIS, DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DTSC will issue a Notice of Determination for the program EIR identifying the selected remedial actions. Soil cleanup would begin after DOE and DTSC conform the decisions included in the DOE ROD(s) and DTSC Notice of Determination and, in accordance with DTSC's regulatory authority as provided in the AOC, and DTSC approves the DOE-prepared soils remediation action implementation plan.

908-1 DOE acknowledges your concern that DOE has broken the 2010 AOC agreement. The purpose of this EIS is to evaluate alternatives in accordance with the requirements of NEPA for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

908-2 DOE conducted historic operations under the laws and regulations applicable at the time. DOE's Office of Environmental Management has been charged with the responsibility of cleaning up 107 sites across the country. To date, the Office of Environmental Management has made substantial progress in nearly every area of nuclear waste cleanup and completed cleanup at 91 of these sites. Additional information can be found at <https://energy.gov/em/office-environmental-management>.

908-3 As indicated in Chapter 1 of this EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings, and groundwater. Chapter 1, Section 1.3, contains a brief history of activities at SSFL and describes the radiological and chemical characterization studies performed for Area IV and the NBZ. Additional information about the activities of DOE and its predecessor agency, the Atomic Energy Commission, at Area IV at SSFL can be found at <http://www.etec.energy.gov/>. Chapter 3, Sections 3.9.5 and 3.9.6, of this EIS contain information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. At the time of the accident it was estimated that the accident resulted in the release (over a 2-month

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1 intentionally released into the environment for weeks,
 2 and then true to pattern, they lied about the accident
 3 and tried to cover it up.

4 In 1964, another reactor had a very similar
 5 accident, and they pushed it up, running it for a year
 6 in the face of clear evidence that the fuel was failing.
 7 80 percent of the fuel was damaged.

8 A few years later, sloppy safety practices
 9 lead to another accident, where again they kept running
 10 it for many months, the failing of fuel, leading to a
 11 third of the core being damaged.

12 There were radioactive fires in the Hot Lab,
 13 where highly irradiated nuclear fuel was disassembled.
 14 And, for decades, they were illegally burning --
 15 (Time clock ringing)

16 MR. PLOTKIN: -- radioactive and toxic chemical
 17 waste in open burn pits with the --

18 MS. LOWE: That's the clock, and I need you to
 19 conclude your remarks.

20 MR. PLOTKIN: Okay.

21 MS. LOWE: Thank you very much. I'm sorry.

22 MR. PLOTKIN: Thank you.

23 MS. LOWE: Denise Duffield will be followed by
 24 Duane Kowalski and then Mark Osokow:

25 MS. DUFFIELD: Denise Duffield. I'm the associate

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period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. Additional information about the 1959 SRE accident can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html. With respect to the statements regarding burning radioactive and chemical waste in open pits, the Former Sodium Disposal Facility was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The facility was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). Additional information can be found at http://www.etec.energy.gov/Operations/Support_Ops/FSDF.html. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. In addition, please see Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response. This Final EIS is being prepared in accordance with NEPA to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. The EIS will inform DOE decisions about remediation of contaminated soil and groundwater, building demolition, restoration of the impacted environment, and disposal of chemical and radioactive waste.

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1 director of Physicians for Social Responsibility Los
2 Angeles. I also serve as a coordinator of the SSFL
3 Work Group. Physicians for Social Responsibility, I'm
4 working for over 30 years for the SSFL cleanup.

5 We thought we finally had a cleanup in 2010
6 when DOE signed the AOC to clean up to background levels
7 the contamination, but the ink was barely dry before DOE
8 started trying to break out.

9 In 2014, just after telling the SSFL Work
10 Group meeting that DOE was committed to upholding the
11 AOC, DOE issued a Public Scoping Comment to the EIS
12 that violated the AOC by considering onsite disposal of
13 contaminants. DOE told us then that the Draft EIS would
14 be done by 2014, finalized in 2015, and cleanup done in
15 2017.

16 The DOE delayed publishing the EIS until now,
17 when it knew several key elected officials who supported
18 the AOC would no longer be in office.

19 It's not nearly a surprise to us then that
20 this EIS violates the AOC with all four alternatives,
21 leading to dangerous nuclear and contamination on site.

22 What is surprising is the length that DOE has
23 gone to to avoid cleaning up SSFL. Last year, we
24 discovered that DOE was secretly funding a group the
25 SSFL had to help it break out of the AOC. The group has

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909-1 DOE acknowledges your concern about cleanup to background levels in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

The purpose of this Final EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a No Action Alternative, in accordance with the requirements of NEPA (Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. This EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the suggestion to discard this EIS and merely follow the AOC, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017]). The completion of both the CEQA and NEPA processes must occur before DOE can complete the comprehensive cleanup of soils and groundwater in Area IV and the NBZ. DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

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1 several ties to responsive parties, including some
 2 that's still consultant to the DOE, and you've heard
 3 from some of those good people already.

4 According to the minutes of the group, DOE
 5 asked to get in touch anonymous because, according to
 6 the chair, it did not want to get a call from Senator
 7 Barbara Boxer.

8 DOE will not release the grant application,
 9 the contracts or the terms, so all we know is that DOE
 10 is paying this fee, \$33,000 a year, with our money to
 11 fight the cleanup, and we don't have access to any of
 12 the documentation.

13 At the same time, DOE reneged on a commitment
 14 to independently administer a community fund, causing
 15 over a dozen community groups near DOE sites throughout
 16 the country to lose funding, including the SSFL Work
 17 Group.

18 Then for the -- for this DIS, DOE's targeted
 19 the members who want the cleanup from participating by
 20 refusing to provide an email address for comments. And
 21 once we discovered the correct email address, which we
 22 used for the public scoping, DOE disabled the email.

23 DOE's DIS has missing documents, which now
 24 there's no way to easily get those documents.

25 DOE has also refused to allow community groups

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909-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

909-3 While the comment is not on the scope or content of this Final EIS the following information is being provided.

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap, and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013. The grant to the CAG was funded through local project funds in an effort to support community engagement. DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards. Information on the SSFL CAG grant can be found here: <http://go.usa.gov/xWpte>.

DOE's Office of Environmental Management started the Community Involvement Fund (CIF) to increase public involvement in the environmental management decision-making process and assist stakeholder groups with analyzing environmental management plans and proposals. The CIF operated from late 2010 until September 2015, and distributed a total of \$1.6 million through 46 grants to 23 recipients around the country, including groups involved in observing SSFL cleanup preparation. These included:

- \$46,800 in 2011 to the Committee to Bridge the Gap.
- \$55,000 in 2012 to the SSFL Advisory Panel, partnering with the Committee to Bridge the Gap. The SSFL Advisory Board is not related to the SSFL CAG.
- \$23,000 in 2013 to Physicians for Social Responsibility – Los Angeles, partnering with the Rocketdyne Cleanup Coalition, Teens Against Toxins and Committee to Bridge the Gap.
- \$20,000 in 2014 to Physicians for Social Responsibility – Los Angeles, partnering with Teens Against Toxins and the SSFL Work Group, which is not related to the SSFL CAG.

909-4 DOE provided a means of submitting comments electronically through a comment portal on the SSFL Area IV EIS website. DOE also allowed comments through regular

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1 to present any slides at this meeting with no good
2 rationale except trying to prevent the public from
3 hearing half more about how the DOE's breaking its
4 cleanup obligations.

5 This EIS is atrocious. All of the terms break
6 the AOCs and risk public health. For DOE to try to show
7 this comment in -- in terms of trucks instead of
8 contamination is absurd. When you see this many trucks,
9 you think this much contamination. That's how it should
10 be regarded. (Indicating)

11 This document should be tossed and DOE should
12 just follow the AOCs. Thank you.

13 MS. LOWE: Thank you, Ms. Duffield. Dawn Kowalski,
14 who will be followed by Mark Osokow, and then John
15 Luker.

16 MS. KOWALSKI: Hi. Good morning. When we started
17 off on this journey, almost 28 years ago, 28 in May, we
18 started meeting in homes with the department, four of
19 us. Look at the room now. I mean, it's still very
20 small considering how many people are affected by this
21 horrendous site.

22 Really, you know, you can look at how many
23 truck levels that you want. But whatever pollution is
24 left out there is potentially harmful to everybody in
25 this room and everybody in the Valley, half the San

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- U.S. mail; orally during the public hearings, or privately with a court reporter prior to the public hearings; and by bringing a hard copy of comments to the public hearings for submittal. DOE apologizes for the confusion over the email address. The email address was previously created for scoping comments, not for comments on the Draft EIS. The email address was discontinued when DOE realized stakeholders had begun to use it for comments on the Draft EIS. In order to better track comments, DOE determined the website was the best method for electronic comments.
- 909-5 For those references that were not appropriate to post on the SSFL Area IV EIS website (e.g., sensitive cultural resource information, copyrighted information) there was a note with contact information so a person interested in these documents could contact and coordinate with DOE to review them. On the SSFL Area IV EIS website, the note initially providing an email address was changed to provide a U.S. mail address and a phone number for questions regarding sensitive references. DOE recognizes that obtaining these references was more difficult than downloading the majority of the references, but DOE is legally required to protect copyrighted materials, sensitive cultural resource information, and any materials protected by client-attorney privilege. DOE notes that it received no inquiries requesting coordination so that the documents could be reviewed.
- 909-6 The purpose of the public hearings was to allow stakeholders the opportunity to make comments on the Draft EIS. PowerPoint presentations were not allowed during the oral comment periods at the public hearings in order to give all commenters equal time. Commenters could submit PowerPoint presentations by uploading to the comment website, posting through U.S. mail, or delivering a hard copy at the public hearings.
- 910-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

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1 Fernando Valley, the Conejo Valley.

2 I'm a cancer survivor. I don't blame it on

3 anything. This is the land of the jewel for me. But I

4 listen to the mom who has to cradle her baby with

5 cancer, and I can't really think of anything more

6 horrific. I think of the retinoblastoma moms, the Milan

7 family, who came to the meetings before Boeing paid them

8 off. And, I think there were nine cases and there were

9 only 250 nationwide, nine cases around the site. Those

10 moms carried their babies for nine months, and when they

11 were born -- and it was a neutro -- then what did they

12 think when they were saying -- when they were holding

13 their baby? They wanted that baby to look at their

14 faces, look at the world, see what they could see in the

15 few months before those eyes were removed. Because

16 retinoblastoma is a cancer of the eyes.

17 I don't think that you can put a number on

18 truck loads when you're talking about cancer. I

19 remember when the oncologist told me that "You have

20 breast cancer," and I didn't know that it feels like a

21 truck hitting me.

22 And you know how many people -- I've heard

23 John Luker say, you know, we don't have cancer. You are

24 so lucky that you never had it as well, believe me,

25 because suddenly your world spins before you. You look

|| 910-1
cont'd

|| 910-2

910-2 Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 at your children in a different way. You look at your
2 husband in a different way.
3 But to have take one last -- when you're a mom
4 and to have to look at your child and to know that your
5 child is facing the biggest challenges in life and
6 you've only had precious little time with them, I cannot
7 even imagine what it is.
8 But I think everyone in this room has to think
9 long and hard and clearly about what -- what legacy they
10 want to leave on this site.
11 Thank you.
12 MS. LOWE: Thank you, Dawn. Mark Osokow will be
13 followed by John Luker, and then Marie Mason.
14 MR. OSOKOW: Good morning. My name is Mark Osokow,
15 and I represent the San Fernando Valley Audubon Society.
16 I'm going to be speaking on my own behalf, however.
17 The -- what you just heard from a lot of
18 people that had experienced cancer is -- is very
19 touching. I've had my own experiences with cancer. My
20 family's been riddled with cancer since I was a child.
21 My mother died from cancer. My uncle died from cancer.
22 My girlfriend of 33 years died from the effects of
23 cancer essentially. So, this is something that I can --
24 I can relate to very, very closely.
25 However, you know, there are millions and

|| 911-1 911-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

3-1515

Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 millions and millions of people in this country who have
 2 had experiences with cancer, have died from cancer.
 3 It's one of the main causes of death in the country.
 4 Most of the people who die from cancer, probably the
 5 overwhelming majority of people have no association with
 6 the Santa Susana Field Laboratory whatsoever.

7 I think the issue with cancer has to do more
 8 with actually finding out the causes and -- of cancer
 9 and the appropriate treatments of cancer, and barking up
 10 the wrong tree is not going to help that. And, I think
 11 that all this attention given to Santa Susana Field
 12 Laboratory with respect to cancer is just that, it's
 13 really barking up the wrong tree.

14 I support the cleanup to the Conservation of
 15 Natural Resources standard. And, although the San
 16 Fernando Valley Audubon Society has not come out
 17 officially for that yet, I expect it will do so. And I
 18 think that the issues of preserving the natural or
 19 cultural resources and historical resources at Santa
 20 Susana are -- are critical to our wildlife and -- in the
 21 area. And we're seeing a lot of developments in areas
 22 around that park area that is just chewing up our
 23 countryside and obliterating all chances for wildlife to
 24 persist in the area.

25 I've done studies at Santa Susana Field

911-1
cont'd

911-2

911-2

DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Chapter 4, Sections 4.5 and 4.11, respectively, for analyses of the potential impacts of these EIS alternatives on biological and cultural resources.

911-3

911-3

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Laboratory since 2011, and have found no impact on the
2 wildlife there whatsoever, and I'll be submitting some
3 extensive comments to refute a lot of the claims. I
4 think that there's exaggerated claims that have been
5 made by people speaking here today in support of the
6 Administrative Order on Consent and the Look-Up Table
7 Values. So, we'll see how this goes.

8 I commend the Department of Energy for this
9 EIS. I think they've done a very good job overall.
10 Although, I have to admit, I haven't read the entire
11 thing from cover to cover. But I think that the
12 introductory documents and other documents that I have
13 read indicate that a sincere effort was made to cover
14 all the issues, and they've done what is necessary to
15 comply with NEPA to the letter, and I greatly appreciate
16 that.

17 So, thank you very much.

18 MS. LOWE: Thank you, Mark. The next speaker will
19 be John Luker, followed by Marie Mason, and then Greg
20 Williams.

21 MR. LUKER: Hi, everybody. My name is John Luker,
22 and apparently I'm evil. A lot of people hold that
23 opinion.

24 I work for four different environmental groups
25 in this area, most notably the Santa Susana Mountain

911-3
cont'd

911-4 911-4 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Park Association. I'm employed by the State of
 2 California in the Resources Department. What I do is
 3 rehabilitate native -- native environments, so I do know
 4 what I'm talking about on some of this stuff.

5 I'd like to come out really quickly and say,
 6 yes, I support the Conservation of Natural Resources
 7 alternative; and, also at the groundwater remediation,
 8 the treatment and monitored natural attenuation. I
 9 think if you can pump it out, you should pump it out.

10 I'd also like to speak to some of the people
 11 who are in the audience, mothers with children and
 12 cancer and teachers. I want you to do what -- what --
 13 was just said, think and think hard. The pollution that
 14 gave your babies cancer did not come from SSFL. It came
 15 from your neighborhood. Look at your back yard, look at
 16 your schools, look at your parks. That is where the
 17 contamination is.

18 If you say this place contaminated an area 10
 19 miles in diameter, then your area is contaminated. Have
 20 any of you had sampling and testing done in your
 21 neighborhoods? If you're a teacher, have sampling done
 22 in your school. They'll do it. They want to get out of
 23 this. They want to prove that there's nothing down
 24 there. Go -- go look at your homes. See if the
 25 Environmental Protection Agency will come and take

912-1

912-1 DOE acknowledges your support for the Conservation of Natural Resources Alternative for soil remediation and a combination of the Groundwater Monitored Natural Attenuation and Groundwater Treatment Alternatives for groundwater remediation. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

912-2

912-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 samples at your house and tell you what's in your back
2 yard. Look under your sink. Look in your -- in your
3 pantry. Look in your garage. What causes cancer in
4 there? 30 percent of people in this room will get
5 cancer and die from it. That is a statistic. Yes, a
6 neighborhood built in 1959, every single house had
7 cancer in it because of that statistic, and that's what
8 you have to think about. Instead of spending billions
9 of dollars cleaning this place up, maybe you should look
10 into your neighborhoods and clean up your neighborhoods,
11 because that's where your babies are getting cancer
12 from.

13 And, it disgust me there are groups that are
14 using this to make money and that's tough. Follow the
15 money, look around the room, figure out how many people
16 are making a living off of this. It's really sad.

17 In any case, that's what I'm doing. I'm
18 trying to preserve habitat, preserve natural resources.
19 It occurs to me that none of the RODs or DTSC has had a
20 meeting that specifically addresses resource management,
21 resource preservation and resource -- resource
22 restoration. I do not see anything in the EIS that says
23 much about a mitigation. Ask yourself, will this turn
24 this place back to its natural state? What will it take
25 to turn this place back in its -- into its natural

912-2
cont'd

912-3

912-3 Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

912-1
cont'd

912-4 DOE has been consulting with Federal and State agencies since 2009 and further information is provided in Appendix E of the EIS. Also, Chapter 6 of the EIS "Measures to Minimize Impacts and Mitigation Measures" presents measures that would avoid, minimize, rectify, reduce, eliminate, or compensate for potential adverse impacts on the environment. Minimization measures are inclusive of methods, procedures and protocols, design features, and best management practices aimed at reducing the environmental impact of project activities. This EIS includes a range of minimization measures, including those that reduce the environmental footprint; improve safety, efficiency, and sustainability; and are incorporated as part of the alternatives' design.

912-4

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 state?

2 And, I would like to think you very much.

3 And, in you can make it to the SSMP meeting this

4 Monday --

5 (Clock timer ringing)

6 MR. LUKER: -- we'll be talking about the history

7 of Burro Flats.

8 MS. LOWE: Okay. Marie Mason. Marie will be

9 followed by Maria Caine and then Sonia Schendel.

10 MS. MASON: I'm Marie Mason, and I live in Knolls

11 right below this facility. All of you have known me.

12 I laid in my bed last night, listening to the

13 two creeks that run through my yard, just roaring

14 through my yard, knowing I was coming to this meeting

15 today.

16 MS. LOWE: Can you just hang on. There's a lot of

17 conversations in the room, and I would like to please

18 limit that so we can focus our attention on Ms. Mason.

19 You have it.

20 MS. MASON: And, although it's just been stated

21 that perhaps my yard's contaminated, hard to get

22 contaminated. I live right below the site.

23 And, John, you made a commitment to us. I've

24 heard you say it over and over you were following the

25 AOCs. This report doesn't follow the AOCs. And, if you

|| 912-4
cont'd

|| 913-1

913-1 DOE acknowledges your concern about the “need to clean up this mess” and following the provisions in the 2010 AOC. Please see Section 2.1, “Preferences for Cleanup,” and Section 2.2, “Compliance with the 2010 Administrative Order on Consent,” of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 look at all the trucks that are going to come down,
2 maybe because they're all full of -- going to be full
3 dirt that needs to get off that mountain. I know you
4 all live in Simi. But, it helps if all the billions --
5 we have spent billions of dollars. I ain't making any
6 money off of this. Let me tell you, I probably spent 27
7 years of my life putting money into doing this. I
8 haven't made a dime out of this. I've lost my property
9 values. I live below it. I have phone calls constantly
10 from people that want to move into our neighborhood but
11 they're scared and I -- I can't give them an answer.
12 I think we need to follow the AOCs. I think
13 Ventura County -- I don't even see anything -- and I
14 have to be honest, I didn't read every page of your
15 report yet, but I didn't -- Ventura County, you're
16 supposed to follow what -- what is already zoned, and
17 you're not -- there's no talk about that. We act like
18 we're just going to leave it all there and Ventura
19 County zoning laws don't have any impact. They do have
20 impact.
21 This needs to be cleaned up. We've wasted
22 billions and billions of dollars doing this. We spent
23 \$42,000,000 on the study that we were all part of, and
24 -- and we know where the stuff is. So, why are we
25 playing around and playing games with this? This is

913-1
cont'd

913-2

913-2

Thank you for your comment. It has been included in the Administrative Record for the EIS.

913-1
cont'd

913-3

913-3

Zoning rules are subject to change. EPA's Risk Assessment Guidance for Superfund, Part A (EPA 1989) states that in identifying future land use one should "determine possible alternate future land uses based on available information and professional judgment." In the Draft EIS, DOE reflected Boeing's stated intent that the future land use of its land at SSFL (including Area IV and the NBZ) would be open space. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. When cleaned up, the future use of the site will be that of open space. All of DOE's soil remediation action alternatives would ensure Area IV and the NBZ are safe for that use.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 ridiculous. We need to clean up this mess. I'd like to
 2 have a job. I'd like for the end of my life to be
 3 knowing that one thing was done and it was over. But my
 4 grandchildren that could never play in my creeks if they
 5 were running through my yard, and my girls loved to play
 6 in the creeks. I think that we're kind of exposing
 7 children if they ran through the creeks. I've never let
 8 my grandsons play in the creeks. I'd say, "No. Sorry.
 9 You can't even go down there yet." Maybe there's
 10 nothing there, but maybe there is.

11 And since -- and I just want to announce that
 12 the Santa Susana Work Group, which you wanted to so --
 13 help wanted to shut us down, we're not being shut down.
 14 We are a voice and we are not going to end our voice
 15 ever if it's to my last breath. We have our next
 16 meeting on March 8th, and maybe you can come and hear
 17 the other side of the story.

18 MS. LOWE: Thank you, Marie. Okay. Maria Caine
 19 will be followed by Sonia Schendel and then Mark
 20 Ruhland.

21 MS. CAINE: Hi. I'm Maria Caine. I'm here today
 22 to express my immense anger and great disappointment in
 23 the Department of Energy.

24 The DOE's Draft EIS breaks the promises made
 25 by the DOE back in 2010 when they signed the

913-1
cont'd

913-4 913-4

DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of the CRD regarding offsite contamination and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

914-1

DOE acknowledges your concern about cleanup of soil contamination in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

914-1

As discussed in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD, in prior cleanup actions DOE has removed most of the buildings in Area IV as well as much of the soil contamination associated with past practices. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a No Action Alternative in accordance with the requirements of NEPA, this Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Administrative Order on Consent. The AOC called for a
2 full cleanup of the site, to be completed in 2017, and
3 here we are, February of the completion year with
4 cleanup not even begun.

5 The Draft EIS proposes four alternatives, all
6 of which violate the AOC. Option one would leave in --
7 in place 39 percent of the contamination. Option two
8 would leave in place 91 percent. Option three would
9 leave in place 99. And, option four would leave 100.

10 DOE raises several unsubstantiated issues and
11 at the top of the Administrative Order on Consent: The
12 first is that it supposedly is too difficult to find
13 soil fill that does not exceed the AOC Look-Up Table
14 Values. However, the Draft EIS that shows that
15 Gillibrand fill meets all requirements with the minor
16 exception of two constituents. The DOE accepts that
17 these are not a risk for human health and the
18 environment. Furthermore, the AOC states that the
19 source of backfill soil cannot meet all the AOC Look-Up
20 Table Values. The Department of Toxic Substances
21 Control and DOE will discuss it, and the DTSC would
22 determine the best available fill, which would appear to
23 be Gillibrand. There's -- they're forming no issue with
24 finding a suitable fill under the AOC, and the DOE's
25 argument is a non-issue.

914-1
cont'd

914-2

914-2

background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors (refer also to Section 2.5, "Toxicity of Soil Contaminants," of this CRD). Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

With respect to the timeliness of additional cleanup, please refer to Chapter 1, Section 1.3 of this EIS, which discusses the order issued by the U.S. District Court for the Northern District of California (Case No. 3:04-CV-04448-SC, May 2, 2007) that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. In accordance with CEQA and consistent with Section 4 of the 2010 AOC, DTSC is preparing an environmental impact report (EIR) that addresses cleanup of all of SSFL (including areas for which NASA and Boeing are responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition. DOE initiated communications with DTSC to discuss schedules and other appropriate matters that would facilitate cleanup activities (DOE 2017a).

The 2010 AOC does not allow consideration of risk and requires all chemicals and radionuclides in backfill soil to be below their respective LUT values in order for the soil to be used in Area IV. DOE notes that it violates the 2010 AOC to determine that a backfill source is "close enough." As stated in the AOC, all chemicals above the LUT values are exceedances and should be remediated. Refer to Section 2.3, "Suitable Backfill Soil," of this CRD for discussion of the responsibilities and actions necessary to identify a backfill source, including interactions with DTSC.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 In regards to transportation, the DOE has also
 2 heavy inflated soil volume estimates, and in doing so,
 3 overestimated the number of truck trips to scare the
 4 local community into supporting DOE's efforts to avoid
 5 cleanup of its contamination field. DOE has had at
 6 least 15 years since it first did its environmental
 7 assessment to adjust for a way of avoiding truck and
 8 pass our neighborhoods if it wished to. There are
 9 numerous routes that would pass new homes. The DOE has
 10 not considered these.

11 There are methods of conveyance besides
 12 trucks, such as conveyer systems to a nearby rail line.
 13 The DOE refused to consider it. There are rail lines
 14 within a mile or so of the site that could be reached
 15 without passing a single home. The DOE refuses to
 16 consider it. The only rail option they considered is to
 17 truck the material 60 miles to Puente Hills to a rail
 18 depot that isn't even open yet.

19 They claim that there is no risk in leaving
 20 all that contaminated -- contamination not cleaned up,
 21 but this is completely false. DOE has misrepresented by
 22 orders 9 to 2, the federal standards. The heinous
 23 contamination not cleaned up would pose great risk to
 24 all who live nearby.

25 In 2010, the DOE signed the AOC. They

914-3

914-3 The volumes in the Draft EIS have a sound engineering basis. DOE used the geographic information system (GIS) database for Area IV to identify on a point-by-point basis, any sample location that had an exceedance of a LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, develop areas and depth of exceedances, and then calculate the soil volume exceeding the LUT values.

914-4

Since the Draft EIS was prepared, DOE has independently recalculated the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data, and recognizing the shallow soil depth over uneven bedrock across Area IV and the NBZ, DOE is not as uncertain about the upper limit of the soil volume estimate as it was at the time the Draft EIS was prepared. DOE's intent is not to alarm people, but it is true that the more soil removed from a cleanup site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required.

914-4

Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

914-5

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

914-5

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLS based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban

914-1 cont'd

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 committed to a full cleanup of their contamination at
2 SSFL. In 2012, DOE promised the EIS would only consider
3 alternatives of how to much -- how to clean up, not how
4 much to clean up. DOE has an obligation how the
5 contaminated SSFL through its failure to follow proper
6 environmental procedures to clean up the site fully as
7 required by the AOC, to do so by the promised deadline,
8 and to attempt to mitigate impasse, such as trucks, by a
9 careful development of alternative transportation
10 options.

11 Thank you.

12 MS. LOWE: Thank you. Sonia Schendel. I'm
13 probably saying that wrong. Followed by Matt Ruhland
14 and then Devyn Gortner.

15 MS. SCHENDEL: Hi. My name is Sonia Schendel, and
16 I'm deeply upset by DOE's DEIS which breaks its legally
17 binding 2010 AOC promise for a full cleanup of the site.

18 Every one of the cleanup options violates the
19 D -- or every one of the cleanup options in the DEIS
20 violates the AOC, leaving in place from 39 percent to
21 100 percent of the contamination when AO -- when AOC
22 barred consideration for any leave-in-place
23 alternative. And if they're to do a full cleanup as
24 promised is unacceptable, posing continued risks to
25 off-set communities. The heavy rains we just

914-1
cont'd

915-1

Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

915-1 DOE acknowledges your concern about a full cleanup of the site in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. In addition to a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, this EIS also evaluates alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 experienced remind us all of the pollution on top the
 2 hill and will continue to until there's a full cleanup.

3 Among its various excuses for not doing the
 4 cleanup, in all of the DEIS options, DOE proposes to not
 5 clean up about thirty -- 300 -- sorry -- 300,000 cubic
 6 yards of soil that they contaminated by claiming what
 7 they purport to be a biological exemption, but they are
 8 grossly misrepresenting this biological exemption, which
 9 is strictly limited in the AOC and for which they do
 10 not qualify.

11 In the 2010 AOC, it was stated that the entire
 12 site must be cleaned up to local background levels. It
 13 allowed a very narrow exemption to be considered only to
 14 the extent that the US Fish and Wildlife Service -- and
 15 I quote -- "issues a Biological Opinion with a
 16 determination that implementation of the cleanup action
 17 would violate Section 7(a)(2) or Section 9 of the ESA,
 18 and no reasonable" or "prudent measures or responsible
 19 and prudent alternatives exist that would allow the use
 20 of" the -- "the specified cleanup standards in that
 21 portion of the site." There have, however, been no such
 22 biological opinion from the US Fish and Wildlife
 23 Service, so the exemption's not valid.

24 Indeed, the US Fish and Wildlife Service did
 25 issue a biological exemption several years ago to the

915-1
cont'd

915-2

915-2

Please refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD for a discussion of this topic and DOE's response. As noted in Section 2.4 of this CRD, the 2010 Biological Opinion has very limited applicability to the present project. The EPA action that was the subject of the 2010 Biological Opinion involved trimming or mowing of vegetation, leaving the soil seed bank intact and the potential for rapid recovery of the vegetation and habitat by re-sprouting or germination from the soil seed bank. In contrast, the soil remediation addressed in this EIS would require removal of vegetation and soils, including the seed bank, a profound and difficult-to-mitigate impact.

At the time the Draft EIS was issued, DOE had been involved in ongoing meetings with the USFWS and CDFW for several years (see Appendix E, Table E-4 of this EIS) and the Biological Assessment required as part of Section 7 consultation had not yet been submitted. Hence, there was no Biological Opinion from the USFWS at the time the Draft EIS was released. The USFWS has now issued a Biological Opinion (see Appendix J) for remediation of SSFL. This Final EIS reflects the results of the Biological Opinion on the exemptions areas in Area IV and the NBZ.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 EPA for its preparatory work for the cleanup, which led
2 to -- involved cutting down much of the vegetation
3 so that -- so a radiation survey could be done. It
4 concluded no problem, mitigation measures could be done
5 and that, indeed, the cleanup of the contamination was
6 critical for protecting biological resources.

7 In the DOE DEIS, however, it says that they
8 are not going to clean up any -- anything in any of the
9 subsequent bio -- biological exemption As. DOE has no
10 right to declare these areas or decide for themselves
11 how to handle them. Furthermore, the guideline says
12 that as biological resources are identified, mitigation
13 measures are to be taken, not that DOE can avoid cleanup
14 altogether.

15 DOE would rather shamelessly time to use the
16 claim of Conservation of Natural Resources as an excuse
17 to break its obligations to clean up the toxic damage it
18 did to those resources. They are claiming to want to
19 protect the environment and species by not cleaning up
20 the contamination, when really all they are doing is
21 hurting the ecosystem as a whole by proposing to leave
22 these deadly chemicals underneath and in place.

23 If they were concerned about the environment,
24 they wouldn't have polluted it in the first place.
25 Breaking the -- the legally --

915-2
cont'd

915-1
cont'd

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3-1527

Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 (Clock timer ringing)

2 MS. SCHENDEL: -- binding cleanup obligation within

3 our reach in terms of environmental --

4 (Clock timer ringing)

5 MS. SCHENDEL: -- and physical (Inaudible) --

6 (Clock timer ringing)

7 MS. SCHENDEL: -- and all we have undoubtedly

8 helped.

9 MS. LOWE: Thank you. Matt Ruhland will be

10 followed by Devyn Gortner and then Isaac Levy.

11 MR. RUHLAND: Hello. My name is Matt Ruhland. I

12 grew up in Thousand Oaks, and I'm outraged.

13 In 2010, the DOE solemnly entered into an

14 agreement with the state regulatory agency, the DTSC,

15 whereby the site would be cleaned up to background, in

16 other words, remove all the dissectible contamination

17 and return to the condition it was before DOE

18 contaminated it.

19 After two rounds of opportunity for public

20 comment, in which more than 3,000 comments were

21 received, all -- all of which but a handful were

22 strongly in favor of the DTSC, and DOE issued an AOC in

23 the summer of 2010.

24 There are several key components to the AOC:

25 One is legally binding. The DOC (sic) cannot be allowed

915-1
cont'd

916-1

916-2

916-1 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In this EIS, DOE does not propose breaking the 2010 AOC signed with its regulator, DTSC. As stated in Chapter 2, Section 2.2.1 of this Final EIS, in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

916-2 None of the alternatives evaluated in this EIS proposes to not comply with the 2010 AOC. As indicated in Chapter 2, Section 2.2.1, of this Final EIS, DOE believes that in order for the implementation of any alternative to be consistent with the 2010 AOC, changes to the AOC would be required. Section 8.0 of the AOC allows DOE and DTSC to agree upon changes to the AOC to better meet cleanup objectives. DOE expects that it will need to engage DTSC in discussions about such changes in order to implement any soil remediation alternative. This EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 to choose to comply with any part of it -- to not comply
2 with any part of it. Two, enough of soil shopping to
3 background. And, critically, three, leave -- no
4 leave-in-place alternatives will be considered.
5 In 2012, DOE issued a Notice of Public
6 Participation in the Development of Alternatives to be
7 Considered in the Santa Susana Field Laboratory at Area
8 IV Environmental Impact Statement. In this statement,
9 DOE acknowledged that, one, DTSC was the regulator and
10 had the regulatory authority over the cleanup. Two, the
11 DOE was obligated to carry out the AOC requirements to
12 clean up to background. And, three, that the EIS would
13 be limited to alternative ways to achieve that same
14 restricted cleanup standards.
15 A few weeks ago, DOE issued a Draft EIS. In
16 the Draft EIS, DOE broke its commitments in the AOC and
17 its past promises about entry through the EIS. It was
18 promised in the community that -- that any EIS would be
19 limited to different technologies to live up to its
20 restricted AOC obligations to clean up all of the
21 contamination, not whether or not to do so.
22 Every option the E -- that the EIS puts
23 forward would leave in place large amounts of
24 contamination despite the -- the explicit prohibition
25 against that in the AOC. Option one would leave in

|| 916-2
cont'd

|| 916-1
cont'd

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3-1529

Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 place 39 percent of the contamination. Option two would
 2 leave in place 91 percent of the contamination. Option
 3 three would leave in place 99 percent of the
 4 contamination. And, option four, would leave 100
 5 percent.

6 The DOE has lacked integrity and transparency
 7 when engaging with the public. Not only is it limiting
 8 the size of comments and files that's been submitted
 9 through their website, we are only allowed 180 seconds
 10 to speak at these meetings. Even yesterday, the DOE
 11 prohibited public testify -- public testimony today from
 12 presenting slides on the information we wanted to
 13 highlight in the Draft EIS, just as they did this
 14 morning. No where on the public hearing announcements
 15 that's prohibited members of the public from presenting
 16 slides. They're refusing to give people the same
 17 opportunity that the government has. The public has
 18 asked numerous times for email comments be accepted --

19 (Time clock ringing)

20 MR. RUHLAND: -- as is the most practical -- and
 21 practical way of meeting --

22 (Time clock ringing)

23 MR. RUHLAND: -- and so, I am done?

24 (Time clock ringing)

25 MS. LOWE: Thank you, Matt. I know. Let me see.

916-1
cont'd

916-3 916-3

Thank you for the feedback on the Draft EIS. Considering public comments on the Draft EIS is an important step in this Final EIS process. DOE's time limit on oral comments at the public meetings was set to allow all stakeholders equal time to present their comments. The intent was not to quell public comment; multiple means of submitting comments were available. These methods included the website, U.S. mail, providing oral comments during the public meetings or to the court reporter before the public hearings commenced, and providing a written transcript at the public hearings. In response to comments about the website, early during the public comment period DOE expanded the capacity of the website to accept longer comments and added the ability to upload entire documents. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS. The purpose of the public hearings was to allow stakeholders to make comments on the Draft EIS. PowerPoint presentations were not allowed during the oral comment periods at the public hearings in order to give all commenters equal time; however PowerPoint presentations could be submitted by providing a printout of the presentation at the public hearing or by U.S. mail, or by uploading the presentation on the comment website.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Devyn Gortner, Isaac Levy, and then Martha Waite. That
2 wasn't very special what I just said. I'm sorry. I
3 meant to say thank you, and I -- I forgot to notice
4 that, so I apologize for that. Okay. You should be
5 Devyn.

6 MS. GORTNER: My name is Devyn Gortner. I grew up
7 in Oak Park, less than five miles from the site. I have
8 been coming to these meetings now for -- or meetings
9 such as this for the last 10 years, and I'm really sick
10 of having to do this, and sick of the polluters trying
11 to weasel out of their commitments to protect us.

12 One of the DOE's proposals for all of the
13 cleanup options in the DEIS is to leave 150,000 cubic
14 yards of contaminated soil in place to supposedly
15 naturally attenuate. However, this is prohibited by the
16 AOC. DOE itself estimates that it could take 70 years
17 for the total petroleum hydrocarbons, or TPHs, to
18 attenuate to required levels. This is outrageous.

19 DOE wants to leave the hazardous materials, which has
20 already been contaminating Santa Susana for 70 years, in
21 place for another 70 years, so that the nearby
22 communities will have faced 140 years of migration and
23 exposure. There are very few, if any, people in this
24 room who will be alive for another 70 years, sorry to
25 say. That means for all of our life times, this toxic

|| 916-2
cont'd



917-1

917-1 The 2010 AOC allows for onsite treatment of soils and natural attenuation was included as a treatment option at the suggestion of DTSC staff. The Draft EIS states that natural attenuation would be applied to soil with "low concentrations" of TPH's where they are the only chemical exceeding comparison criteria. Based on soil treatability studies, it appears that monitored natural attenuation will be able to degrade TPH concentrations in these soils to below their AOC LUT values within 70 years. See Chapter 2, Section 2.3.2 of this Final EIS for additional information. Soils with higher concentrations of TPH would be removed, as they would take longer than 70 years to attenuate.

3-1531

Section 3 - Public Comments and DOE Responses

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 stew that the DOE created will be in the midst of our
 2 communities, so every time it rains, as it has been
 3 doing profusely for the last couple of days, it will
 4 migrate down to expose the people and the environment.
 5 But, it gets worse. This 70-year estimate,
 6 which is just one of the many that's been talked about
 7 for the TPHs to supposedly attenuate, it turns out to be
 8 false. The DOE's cites a Particular Report as the basis
 9 for that conclusion, but, in fact, it is simply citing
 10 to another report which doesn't actually conclude that
 11 the hazardous stuff will degrade in 70 years. In fact,
 12 it says it will take much longer, because the easiest
 13 stuff to degrade did so already, and what is now left
 14 degrades very slowly, if at all. It's not a linear
 15 process. In fact, the study measured that the --
 16 sorry -- degradation rate -- natural attenuation rate
 17 given for the conditions at the site, when they tested
 18 it, they found no natural attenuation at all. So, once
 19 again, the DOE misrepresented the facts as a way of
 20 trying to get out of the cleanup agreements. But,
 21 whether it's 70 years that the DOE wants to leave the
 22 TPHs in place or far longer, it's unacceptable.
 23 And let us keep in mind that the majority of
 24 the contamination that the DOE now proposes to walk away
 25 from, it admits there's no basic -- there is basically

917-1
cont'd

917-2

917-2 As described in Section 2.10, "Public Perceptions about Waste and Contamination in Area IV" of this CRD, Area IV and the NBZ are not "heavily contaminated." The Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative would remove the contamination that would be a risk to human health and the environment. What would be left under the two alternatives, are low concentrations of chemicals that do not pose a risk to human health and the environment. As described in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 no attenuation at all, and that it will be there for
2 practically, you know, for eternity, capable of
3 migrating off the site and affecting the community.

4 The DOE contaminated the site by grossly,
5 irresponsible environmental practices. It solemnly
6 signed a legally binding agreement to clean it all up,
7 and now they're breaking its promises. It's as simple
8 as that, and it's totally unacceptable.

9 You are playing with my health. You are
10 playing with my life. You're playing with my family's
11 health. You are playing with my community's health.
12 And my community doesn't care about trucks driving by
13 the neighborhood. You know, we care about getting that
14 contamination out of there. So, DOE, please, live up to
15 your commitments. Clean up all the contamination and
16 stop the risk in the nearby community with your toxic
17 pollution and toxic actions.

18 Thank you.

19 MS. LOWE: Thank you, Ms. Gortner. Isaac Levy will
20 be followed by Martha Waite and then Ms. Kidd.

21 MR. LEVY: I'm Isaac Levy. I've been a resident of
22 Simi Valley for 28 years.

23 I've been coming to this meeting now for over
24 three years. I tell you, prior times, when you guys
25 celebrated in 2010, when the AOCs were signed, in fact,

917-2
cont'd

917-3

917-3 DOE acknowledges your preference of cleanup of all the contamination and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

917-4

With respect to your concern about risk in the neighborhood community, please refer to Section 2.7, "Offsite Impacts," and Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for additional information. As discussed in these sections, Area IV is not currently spreading contamination to offsite areas, including offsite groundwater, and each of the alternatives evaluated in this EIS is protective of public health and safety and the environment, both on and off the SSFL site.

917-4

917-4 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

918-1

918-1 DOE acknowledges your concern about compliance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives in accordance with the requirements of NEPA for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 I look back at it. I think it was monumental. But, it
 2 seems like for the last three years, all we're doing is
 3 going backwards. Every time I come to this meeting,
 4 meetings like this, I see the charts, I see the -- the
 5 bows of the trucks. It's a combination of how many
 6 trucks, how much dirt you're removing, and then how long
 7 it's going to take, and the inconsistencies are
 8 tremendous.

9 At the beginning of the meeting, I saw one of
 10 your charts, and it said -- it talked about a study,
 11 March 2003, a U.S. Department of Energy. At that point,
 12 you said it was going to take 404,850 cubic meters.
 13 That's what would have to be removed. I call your
 14 attention that to your technical memorandum, September
 15 2013, that said there were going to be up to, not
 16 400,000, not 800,000, then you talked about there would
 17 be a million six. But then you put in a little
 18 disclaimer, it said, well, it could be plus 50, minus
 19 30. You put -- you put in a Report of Memorandum that
 20 varies of 80 percent. Then you go to March 2014. Then
 21 incorporated in a NASA report was, you said, hey, it's
 22 850,000 cubic yards, it's 53,125 trucks, and at 213 per
 23 day, it would be -- you removed in one year. I didn't
 24 write the reports. That was written by you.

25 Now, come to the meeting today. Again, I call

918-1
cont'd

918-2 918-2

EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

DOE's estimate of the contaminated soil volume has changed as more information has become available. Estimates prior to 2013 did not have the specific LUT values as a basis. Estimates subsequent to 2014 had the benefit of the characterization data from the extensive sampling performed by EPA and DOE. The volumes in the Draft EIS have a sound engineering basis. DOE used the geographic information system (GIS) database for Area IV to identify on a point-by-point basis, any sample location that had an exceedance of a LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, develop areas and depth of exceedances, and then the calculation of the soil volume exceeding the LUT values.

Since the Draft EIS was prepared, DOE has independently checked the estimate of the soil volume associated with cleaning up to the 2010 AOC LUT values. Based on the characterization data, and recognizing the shallow soil depth over uneven bedrock across Area IV and the NBZ DOE is not as uncertain about the upper limit of the soil volume estimate as it was at the time the Draft EIS was prepared.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 it the bow of the trucks or whatever. We've gone from
2 one year removal. Now you're saying it's 10 years
3 removal.
4 All this started actually -- I started looking
5 into this when I attended a meeting that was held on
6 Monday -- excuse me -- that was held in Simi Valley
7 August 7th, 2014. Two and a half years ago there was a
8 Transportation Option Study. I was told at that point
9 in time within one year you'd come up with the amount of
10 trucks that it would take, the right volume and the time
11 table. Well, the bottom line is -- actually, prior to
12 that meeting, on Monday, July 14th, ThyssenKrupp
13 Industrial submitted three different plans, and the
14 number of trucks is zero. They looked at conveyor A and
15 B was presented in that meeting, conveyor A and B, which
16 isn't even mentioned in your report. ThyssenKrupp, if
17 you haven't heard of them, they're a company with
18 150,000 employees, world renowned, and -- and a revenue
19 of over \$40,000,000,000. That report, which talked
20 about tower-to-tower fill site and road site conveyors,
21 which would be 100 percent safe because it's a sealed
22 conveyor, is missing.
23 The other thing I ask is, is this about
24 cleanup or is it about money? You know, 2014 report, I
25 looked at this --

918-2
cont'd

918-3

918-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

918-4

918-4 Any cleanup performed by DOE in Area IV and the NBZ would remove soil contamination to levels that would be protective of human health and the environment, leaving the site safe for use as open space. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. Because the AOC cleanup is not the normal way DOE, EPA, or California DTSC perform soil cleanups, DOE evaluated the costs and benefits of the AOC cleanup versus what is normally done (that is, a cleanup that is based on risk and future land use). That analysis demonstrated that the AOC cleanup would be much more expensive and with minimal additional protection of public health and the environment.

918-4

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 (Time clock ringing)

2 MR. LEVY: -- and it's above maybe 400 million

3 dollars at full cleanup or 25 million at partial. Are

4 you putting the money --

5 (Time clock ringing)

6 MS. LOWE: Thank you, Mr. Levy.

7 MR. LEVY: -- atop the lives of other people?

8 MS. LOWE: Martha Waite will be followed by Nancy

9 Kidd, will be followed by Daniel Hirsh. Is Martha Waite

10 present? I'll try her again later. Nancy Kidd will be

11 followed by Daniel Hirsh and then Margery Brown.

12 MS. KIDD: Good morning. How is everybody feeling?

13 MR. UNIDENTIFIED: Terrible.

14 MS. KIDD: Pretty depressed. Sorry about that.

15 This has been a very contentious issue, and it has been

16 very sad for many other people and the stories that we

17 have heard today.

18 MS. LOWE: Ms. Waite, could you remember to state

19 your name for the record, please?

20 MS KIDD: I'm sorry. I'm Nancy Kidd.

21 MS. LOWE: I'm sorry. Okay. I had Martha. But

22 I'm glad -- glad you clarified it. Okay. Go ahead.

23 MS. KIDD: And it's -- it's really heartbreaking to

24 hear these stories and to hear these consternation over

25 all of these years and people having so much invested in

918-4
cont'd

Response side of this page intentionally left blank.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 the sadness of some kinds of activities that occurred
2 many, many years ago.

3 I am with the Simi Valley Historical Society,
4 and in November we are actually hoping to celebrate
5 Santa Susana Field Laboratory for the rocket engine
6 testing, not for your contamination issues. We are
7 hoping that you can remember perhaps through the years
8 and through the grief that the rocket engines that were
9 born in flame and glory up there put our nation at the
10 forefront of the space program, and it was our proudest
11 achievements in our history. We are hoping that you can
12 see that part of the Santa Susana Field Laboratory and
13 join us. And, we are sorry that it has been such a
14 contentious issue for so very long, and we hope, too,
15 that all of this can find a final solution.

16 MS. LOWE: Thank you. Daniel Hirsch will be
17 followed by Margery Brown and then Elena Semper.

18 MR. HIRSCH: My name is Daniel Hirsch. I'm the
19 director of the Program on Environmental and Nuclear
20 Policy -- it's in Santa Cruz -- and the president of the
21 committee Bridge the Gap. I have less than 180 seconds
22 to try to rebut a half hour presentation filled with
23 falsehoods by the Department of Energy, knowing lies.

24 You said that the first option complies with
25 the AOC, yet you -- it actually leaves in place 39

919-1

919-1

Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

920-1

920-1

Option 1 referred to by the commenter is the Cleanup to AOC LUT Alternative. The description and analysis of this alternative in the EIS incorporates all technical elements of the AOC. The commenter is referred to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC,

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 percent of the contamination when the AOC bars
 2 leave-in-place alternatives. Every way it's actually
 3 claimed in there is, in fact, contradicted by the AOC.
 4 You have no biological opinion by Fish and Wildlife.
 5 You have no recognized Native American artifacts and the
 6 attenuation is barred.

7 The next option violates not just the AOC, but
 8 the 1995 Joint Policy with the U.S. Environmental
 9 Protection Agency the DOE entered solemnly into, which
 10 doesn't seem to bother the DOE to enter into agreements
 11 you break, which promised that all DOE sites would be
 12 cleaned up consistent with EPA CERCLA guidance. EPA
 13 CERCLA guidance bars averaging for residential scenario.
 14 It bars it for any scenario where there is non-granted
 15 use. EPA guidance further bars the exclusion of the
 16 backyard garden which is for residential. You folks
 17 claimed that you were complying with the Standardized
 18 Risk Assessment Methodology by DTSC, which actually
 19 includes the backyard garden, and the DTSC policy that
 20 you have to do things based on current zoning, which
 21 Ventura has already identified the use and -- and allows
 22 the provision in garden. By doing so, you lied to this
 23 community to tell them that there was essentially no
 24 risk in leaving 99 percent of the contamination buried,
 25 said it's a one-in-a-million risk. But, to do that, you

920-1
cont'd

920-2

using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities.

The commenter is inaccurate his statement that “the attenuation is barred.” Natural attenuation was included as a treatment option in the EIS at the suggestion of DTSC staff. Section 2.6 of the AOC anticipates the potential for in situ treatment, which includes natural attenuation.

At the time the Draft EIS was issued, there was not a biological opinion for the project from the U.S. Fish and Wildlife Service. The Biological Opinion by the USFWS was released in August 2018 and was used in part in establishing the exemption process described in the Draft and Final EIS documents. The AOC exemptions are based first and foremost on DOE’s compliance with Federal, State, and local laws. The AOC does not affect compliance with laws. Per the AOC, exemptions are based on consultation with USFWS and determination of Native American artifacts formally recognized as cultural resources. Concerning the Native American artifacts exemption in the AOC, the particular application and scope of the phrase “Native American artifacts that are formally recognized as Cultural Resources” will be determined in cooperation with DTSC and in consultation with the California SHPO, Santa Ynez Band of Chumash Indians, other tribes, and other consulting parties in the Section 106 process. The exemption process described in the Draft EIS was based on several years of meetings attended by USFWS, CDFW, and DTSC staff. Those meetings are documented in Appendix E of the EIS. CDFW provided a letter accepting the exemption process (CDFW 2016) and the process is addressed in USFWS’ Biological Opinion (see Appendix J). DOE’s use of the cultural resource exemption is based on site surveys and discussions with the State Historic Preservation Officer and staff, as well as Native Americans. Please refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD which discusses the process DOE followed for implementing the regulatory requirements for protection of biological and cultural resources. For this Final EIS, USFWS has issued a Biological Opinion (see Appendix J) and DOE is developing a National Historic Preservation Act (NHPA) Programmatic Agreement for protection of cultural resources in consultation with the California Office of Historic Preservation, the federally recognized Santa Ynez Band of Chumash Indians, and non-federally recognized tribes.

920-2 DOE is assuming that the “next option” referred to in the comment is the Cleanup to Revised LUT Values Alternative. Under this alternative, DOE would replace the LUT values for chemicals with risk-based screening levels for soil and use the AOC LUT values for radionuclides. Providing cleanup alternatives in the EIS does not “violate” the

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 purposely used the risk-based screen level that is a
2 thousand times higher than the EPA standard or the
3 standard in the DTSC SRAM. You knowingly lied to tell
4 people that the only call-up is trucks, which is what
5 you've been trying to scare people about so that they
6 won't -- they'll back you in your efforts to break up
7 with the cleanup.

8 Your third option says you will use 25
9 millirem a year. People don't know what that is. That
10 means you would be forcing people to get the equivalent
11 of a chest X-ray every month from the moment of
12 conception to the moment of proof. You said that's
13 consistent with the EPA's guidance. EPA bars the use of
14 25 milirems, says it's non-protective. And, because
15 you're averaging and because you are also not including
16 a full suburban residential scenario, it's actually the
17 equivalent of 100 chest X-rays a month, you're third
18 option.

19 And I want everyone in this audience to think
20 twice about getting one chest X-ray. To think about the
21 morality of demanding that people get exposed to the
22 equivalent of 100 a month because the Department
23 contaminated the site by breaking the law, and now
24 you're breaking this commitment to clean it up.

25 So, the fundamental point is this, one last

920-2
cont'd

920-3

920-4

AOC. The AOC contemplates that the NEPA process may have to be followed. Once DOE engaged in the NEPA process, it is required of DOE to evaluate "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. The 1995 DOE-EPA Joint Policy mentioned by the commenter created a framework for the conduct of decommissioning of DOE facilities and provided guidance to EPA Regions and DOE Operations Offices on the discretionary use of CERCLA response authority to decommission such facilities. The policy is no longer in effect. DOE notes that SSFL Area IV and the NBZ are not on EPA's National Priorities List and do not have to be cleaned up under the CERCLA law. However, DOE did follow USEPA guidance used for CERCLA sites in conducting risk assessments for the Conservation of Natural Resource scenarios. Use of risk-based soil screening levels derived using EPA risk assessment principles would also be consistent with CERCLA, and would not "violate it."

The commenter is inaccurate when he states that EPA CERCLA guidance "bars" averaging for a residential scenario. EPA CERCLA Risk Assessment Guidance (EPA 1989) prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95), meaning soil averaging is the norm; it is not barred as the commenter suggests. Regarding the commenter's statement that EPA guidance "bars the exclusion of the backyard garden which is for residential," EPA guidance requires an assessment of the most likely future land use in establishing the risk assessment basis. Because residential redevelopment with garden is not a future land use for SSFL, that scenario was not included in the EIS. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site, and firmly establishes the basis for establishing cleanup levels based on use of the land as open space. The soil screening levels used in the EIS were taken directly from the DTSC approved SRAM and reflect the residential scenario without garden. The screening levels are not 1,000 times higher than any equivalent EPA standard or the SRAM.

This EIS provides estimates of the number of trucks required to transport soil from SSFL based on the estimated volume of soil under each alternative. The volumes have been independently verified and confirmed for use by DTSC in its Draft EIR (DTSC 2017b).

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 thing: You don't even have the right to do this EIS.
 2 The Department of Toxic Substance Control is your
 3 regulator. Under Rick Brausch, the polluter doesn't
 4 get --
 5 (Time clock ringing)
 6 MR. HIRSCH: -- to pick out how much contamination
 7 it's going to clean up. You can't break the AOC.
 8 (Time clock ringing)
 9 MS. LOWE: Thank you, Mr. Hirsch.
 10 MR. HIRSCH: You don't have that regulation. And
 11 you can't break Rick Brausch. And, it is a shameful
 12 thing to break your promises and to put people's lives
 13 at risk.
 14 MS. LOWE: Thank you --
 15 MR. HIRSCH: I don't know --
 16 MS. LOWE: -- Mr. Hirsch.
 17 MR. HIRSCH: -- how you can sleep.
 18 MS. LOWE: Margery Brown will be followed by Elena
 19 Semper, and then Christina Walsh. Do we need that -- to
 20 adjust that for you?
 21 MS. BROWN: No. My name is Margery Brown and --
 22 MS. LOWE: Thank you for helping her.
 23 MS. BROWN: -- I have been working on the cleanup
 24 of -- for 10 years now. I am on the board of the West
 25 Hills Neighborhood Council, have been on the Environment

920-4
cont'd

920-3 The third option referred to by the commenter is the Conservation of Resources Alternative. This alternative is based on a risk-based soil cleanup process like that followed by EPA at CERCLA sites nationwide and DTSC-regulated sites throughout California.

DOE chose to identify the 25 millirem per year in its risk-based alternative for cleanup in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). DOE notes that the Conservation of Natural Resources Alternative (both scenarios) analysis in this Final EIS results in radiological risks in the 10⁻⁵ range; this would correspond to a dose much lower than 25 millirem per year.

920-4 The commenter is inaccurate in his statement that DOE "does not have the right to do this EIS." Section 7.11 of the AOC states that "All actions taken pursuant to this Order by DOE shall be undertaken in accordance with applicable local, State, and Federal laws and regulations." NEPA is a Federal law that requires Federal agencies to consider the impact of major Federal actions that could significantly affect the quality of the human environment. For those major actions, NEPA requires Federal agencies to prepare a detailed statement (an EIS) that analyzes the potential environmental impacts of the Proposed Action and "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. In addition, as discussed in Chapter 1, Section 1.3 of this EIS, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS and issued a Record of Decision pursuant to NEPA. The obligation for DOE to prepare the EIS pursuant to the court's order is referenced in Section 6.1 of the AOC. Section 6.2 recognizes the need to complete an environmental review that meets the requirements of the court order. DOE recognizes that the 2010 AOC is a legally binding agreement with the DTSC and that DTSC has regulatory authority over aspects of DOE's cleanup of Area IV and the NBZ, including soils and the RCRA-regulated buildings.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Committee for 10 years re the cleanup, and my friends
2 at -- at the -- on the board tell me that every once in
3 a while I turn back into a probation officer. Well, I
4 can't help it. I was one for 45 years, spending great
5 amounts of energy and time working with kids to get them
6 to stop trying to manipulate the system and to take
7 responsibility for what they do, to be accountable.
8 And, when adults, and particularly government adults,
9 are exhibiting the same kind of manipulative behavior,
10 it really appalls me, so I turn back into a DPO once in
11 a while, and you'll have to forgive me. I don't mean to
12 scold you, but I have seen very upsetting attempts to
13 break the AOCs all over the place.

14 Not one of the four suggestions that you have
15 made in your EIS is acceptable, and all of them violate
16 the AOCs, which shouldn't have been provision for
17 risk-based analysis. And the talk is constantly about
18 risks-based this and risk-based that. Hey, you signed a
19 legal agreement. I expect you to uphold it. That
20 agreement provides for taking care of nature, for
21 taking care of indian caves and paintings, all of the
22 things that those who are concerned about the
23 environment care about.

24 There is a vision that I have of all those
25 trucks that were running up and down Woolsey Canyon when

921-1

921-2

921-1 DOE acknowledges your preference for compliance with the 2010 AOC and refers you to Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. In addition to a No Action Alternative (required by NEPA regulations), this Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. The comparative analysis of these alternatives allows the public and DOE decision-makers to understand the trade-offs associated with options for cleanup of Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

921-2 DOE's intent is not to alarm people, but it is true that the more soil removed from a cleanup site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. DOE would ensure that waste materials transported from the site by truck were well contained to prevent the spread of contamination and particulates. The analyses in this EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs between the alternatives. In the case of soil remediation and using the Conservation of Resources Alternative as an example, leaving more soil, and consequently low concentrations of chemicals and/

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1 the place was open, and when you were making your huge
 2 nuclear mess and chemical mess, there were trucks then.
 3 I am getting very tired people trying to scare some of
 4 us about the vision of all these trucks running around,
 5 spreading contamination and particulates and all of this
 6 stuff that will cause cancer, and now we have dementia.
 7 It's not going to happen. There's a railway that's a
 8 block away. Please consider some other alternatives,
 9 and please carry out the AOCs which you've signed.
 10 Thank you.
 11 MS. LOWE: Thank you. Elena Semper will be
 12 followed by Christina Walsh and then Kamara Sams.
 13 MS. SEMPER: My name is Elena Semper. I'm a
 14 Certified Conduct Reality Project Leader. I'm on the
 15 Porter Ranch Neighborhood Council -- thank you -- the
 16 Porter Ranch Neighborhood Council Sustainability
 17 Committee. I'm speaking on behalf of myself.
 18 I grew up in the Valley. I'm aware of my
 19 playground, being in a contaminated, toxic wasteland.
 20 Our roots are strong and unpredictable and we're atop a
 21 serious earthquake fault, making partial remediation
 22 unacceptable. Alternative solutions and alternative
 23 facts just don't make sense. I urge the Department of
 24 Energy to pull its part, AOC.
 25 Thank you.

921-2
cont'd

921-3

921-1
cont'd

922-1

922-2

922-3

921-3

922-1

922-2

or radionuclides on site, reduces the number of truck trips from the site and associated transportation risk and air quality impacts. But, the potential impacts to a site user following cleanup would be highest for this alternative. Conversely, removing the soil with low concentrations of chemicals and/or radionuclides, as would be the case for the Cleanup to AOC LUT Values Alternative, would result in more truck trips from the site and increases the transportation risk and air quality impacts. But the potential impacts to a site user following cleanup would be lowest. Although the cleanup levels under the three soil remediation action alternatives and scenarios are different, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment regardless of the alternative (see Chapter 4, Section 4.9).

Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Earthquakes are a hazard in California; however, as stated in Chapter 3, Section 3.2.1.3 of the Draft EIS, Geologic Faults, "None of the faults in Area IV have been classified as "active" faults by the California Geological Survey (Jennings and Bryant 2010). Active faults are those that have had movement within the last 11,700 years. Area IV and the NBZ are, however, susceptible to earthquakes due to movement along distant faults. Some slopes in the valleys in the NBZ and the north-facing slope of the hill in the southernmost part of Area IV have been identified as Earthquake-Induced Landslide Zones (California Department of Conservation 1998). This designation is based on topography, geologic materials and structure, geotechnical data, rock strength data, and estimates of earthquake-related shaking." Stability of the remediated

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 MS. LOWE: Thank you. Christina Walsh will be
2 followed by Kamara Sams and then Brant Armbruster.
3 MS. WALSH: Hi. My name is Christina Walsh. I
4 live in West Hills. I've been involved in this for a
5 very, very, very long time, and I can't believe we're
6 still trying to consider what we should do. You know,
7 it's like Groundhog Day nightmare.
8 I do believe that the AOCs, the one -- and we
9 should be kind of -- it's sort of weird. We're sort of
10 in this place where we're pretending that there isn't a
11 brand new administration, a new world ahead of us when
12 it comes to the environment, and I think we should pay
13 attention there is legislation on the table to remove
14 the EPA by 2018, so let's give a little perspective.
15 And the AOC is, I believe, the only place
16 where the federal government, the federal entities, the
17 responsible parties voluntarily agree to do what is
18 asked to be regulated by the State of California. So,
19 when we try to bash away the agreement, the one and only
20 thing that is holding it together, I am concerned about
21 that.
22 I'm also concerned when I see a republished
23 chart that's distributed to the public by the CAG that
24 shows the alternatives but they're all marked AOC except
25 for no action. So, that really, really, really is

923-1

923-1

Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

923-2

923-2

DOE acknowledges your concern about compliance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives in accordance with the requirements of NEPA for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

923-3

923-3

DOE does not control information distributed by those it has funded, including not only the CAG, but also the SSFL Advisory Board, SSFL Work Group, Committee to Bridge the Gap, Physicians for Social Responsibility, Rocketdyne Cleanup Coalition, and Teens against Toxins.

contamination areas will be taken into consideration in the excavation and grading plans. The risk from accidents caused by earthquakes is addressed qualitatively in Chapter 4, Section 4.9.2. Please see Section 2.1, "Preferences for Cleanup," of this CRD for a discussion of commenters' preferences regarding cleanup.

922-3

DOE acknowledges your concern about compliance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives in accordance with the requirements of NEPA for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 disinformation. That isn't alternative facts. That is
 2 fraudulent, false activities that -- that harm the --
 3 the community. This is supposed to be the opportunity
 4 to be able to shape what this cleanup looks like. So,
 5 we don't do crazy. You know, we don't want crazy
 6 either. But it seems that we're always pushing against
 7 nothing, so we have to push hard, and we've been pushing
 8 for a long time.

9 The cleanup options, when I look at those
 10 alternatives that you showed, the ones, the really big
 11 number of trucks, and the really big number of soil, of
 12 years, all of that, it also shows that on that
 13 alternative, you require that you remove all the roads
 14 and everything, but you don't in the other ones. So, I
 15 do agree with the people that have said that there's a
 16 false exaggeration of how many trucks that there might
 17 be instead of a real effort to try to deal with near
 18 background. It is not a one-page, one-word agreement.
 19 This is background. It is a 45-page document with lots
 20 of addendums that show how we have to adhere to those
 21 exceptions, and I expect you to adhere to the
 22 exceptions. They are important. They are the way to
 23 make this reasonable and safe. Both can be -- excuse
 24 me. I'm sorry about that. Too close.

25 I also want to clarify a few things, and I

923-3
cont'd

923-4

923-4 Within Area IV, about 10,000 feet (less than 2 miles) of paved road remains. As stated in the Draft EIS, DOE does not plan to remove any road. An exception may be made for roads where soil contamination has been shown to extend below a road. Inclusion of the roadways on the figure was not intended to imply that they would be removed; the figures have been revised in this Final EIS.

923-5

923-5 Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of this topic and DOE's response.

923-6

Please see Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of the EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

923-6

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 appreciate the -- the -- the woman who came forward with
2 all those pictures of those children. That's something
3 that we need to remember. We need to remember what has
4 happened here and we need to not -- you know, and
5 CAGnians, I've seen the CAG leadership say to Bonnie
6 Klea, "Bring those cancer victims to me, show them to us
7 as if they are false, as if we are making up children."
8 I think we know that that is not the case, and it is not
9 appropriate to do so. I founded the CAGs, so here I am.
10 The fact is, that I was pushed out because --
11 (Timer clock ringing)
12 MS. WALSH: -- it was not allowed for me to make a
13 presentation that countered the
14 radiation-is-good-for-you presentation --
15 (Time clock ringing)
16 MS. WALSH: -- and concerns because that was narrow
17 dated. Thank you --
18 MS. LOWE: Time --
19 MS. WALSH: -- very much.
20 MS. LOWE: -- clock. Kamara Sams will be followed
21 by Brant Armbruster and then Alex Kim.
22 MS. SAMS: Hi. I'm Kamara Sams and I'm with the
23 Boeing Company.
24 Thank you for this opportunity to provide
25 comments on the Draft EIS. Boeing's the owner of Area

923-6
cont'd

Response side of this page intentionally left blank.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 IV and the Northern Buffer Zone, the property that is
 2 primarily under evaluation in the Draft EIS. We look
 3 forward to working -- to continuing to work
 4 cooperatively with DOE and NASA as field activities at
 5 Santa Susana are implemented.

6 Boeing will be submitting written comments on
 7 the Draft EIS, but we wanted to take this opportunity to
 8 express our support of your agency's approach to its
 9 analysis under NEPA in preparing the Draft EIS.

10 NEPA requires a statement of the purpose and
 11 need for the proposed action, and DOE properly concluded
 12 that it is to remediate its portion of the site to
 13 protect both human health and the environment. The
 14 applicable federal and state statutes mandate this
 15 purpose. NEPA also requires the coordination -- the
 16 consideration of alternatives that will achieve the same
 17 purpose of reducing risk but will cause fewer or less
 18 serious environmental impacts. We support DOE's
 19 decision to evaluate alternatives to an AOC Look-Up
 20 Table Values cleanup.

21 We appreciate DOE's acknowledgment in the
 22 Draft EIS that Boeing, as the property owner, will
 23 permanently preserve the land as open space; there will
 24 never be homes, gardens or any agricultural use. The
 25 Draft EIS demonstrates that the AOC Look-Up Table Values



- 924-1 924-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.
- 924-2 924-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.
- 924-3 924-3 Thank you for your input. DOE's intent is to provide a range of alternatives to allow for a comparison of impacts among different approaches to the cleanup.
- 924-4 924-4 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. This Final EIS was revised to incorporate the conservation easements, its restriction measures, and soil cleanup scenarios consistent with future use as open space (e.g., exposure to a recreational user).

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 cleanup alternative is at odds with the future use of
2 the -- of the property as open space because it would
3 profoundly disturb natural resources, ecosystems,
4 wildlife habitat and wildlife corridors, resulting in
5 decades-long or permanent damage to these irreplaceable
6 environmental resources. The Look-Up Tables Values
7 cleanup would also impose on the community a decade of
8 unnecessary truck traffic, with increased emissions and
9 traffic accident risk.

10 Boeing supports a reasonable cleanup of the
11 site that fully protects people, wildlife, habitat and
12 cultural resources. As the property owner, Boeing is
13 pleased that your Draft EIS acknowledges that
14 alternative approaches to remediating Area IV and the
15 Northern Buffer Zone will be protective of human health,
16 shorten the cleanup schedule, reduce impacts to adjacent
17 communities, and limit damage to Santa Susana's unique
18 biological and cultural resources that are worthy of
19 protection.

20 Thank you.

21 MS. LOWE: Thank you. Brant Armbruster will be
22 followed by Alex Kim and then Carla Bellinger. Is Brant
23 Armbruster present? Okay. Alex Kim? Are you Alex?
24 No. Sorry. Okay. Carla Bellinger? Carla will be
25 followed by Anthony Zepeda and then I will recall Greg

924-4
cont'd

924-5

924-6

924-5 DOE needs to complete remediation of SSFL Area IV and the NBZ to comply with applicable requirements for cleanup of radiological and hazardous substances. DOE needs to remove the remaining DOE structures in Area IV of SSFL and clean up the affected environment in Area IV and the NBZ in a manner that is protective of the environment and the health and safety of the public and workers. The EIS considers alternatives for accomplishing these tasks, and each alternative addresses the potential impacts that implementing the alternative could have on several resource areas, including human health and safety, biological and cultural resources, ground and surface water resources, air quality, and transportation and traffic. After publication of this Final EIS, DOE's decision will be issued in a Record of Decision published in the *Federal Register*. This decision will reflect the consideration and balancing of the potential impacts on all evaluated resource areas.

Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

924-6 DOE acknowledges your support for alternative approaches to remediating Area IV and the NBZ that protect human health, biological, and cultural resources while reducing impacts to adjacent communities. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Section 3 - Public Comments and DOE Responses

3-1547

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Williams.

2 MS. BELLINGER: I'm Carla Bellinger, and I

3 organized the Public Land Alliance Network, which is

4 simply a way for all the environmental groups to meet

5 quarterly and work out solutions to save our open space

6 and parkland in our community.

7 I just want to do a side bar here. I grew up

8 in -- I mean -- excuse me -- my children grew up in

9 either -- with -- in the area that is now under

10 development of about 460 homes in what is called "Runkle

11 Canyon." This development was approved after much

12 testing by DTSC for this development. I lived there

13 back in the late '70s. None of my children nor I have

14 cancer.

15 I am sympathetic to just the horrendous,

16 horrible effects of cancer on so many lives. But I do

17 not believe that you can always just play to the Santa

18 Susana Field Lab.

19 I also lived on the other side on Woolsey

20 Canyon for 12 years. That area was very much tested for

21 any contamination during a period of time when the park

22 I lived in was being considered for sale.

23 So, I think we need to be responsible and

24 reasonable. And, I very much appreciate the work that

25 DOE and Boeing has done to the areas on an ongoing

925-1

925-1

Thank you for your comment. It has been included in the Administrative Record for the EIS.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 cleanup process that Boeing's doing in -- in
2 consideration of protecting our natural resources.
3 I think it's time for a new vision. I have
4 seen a program about 10 parks that are unusual, and one
5 of them is called the "Glass Works Park" in Seattle.
6 This park was once highly, highly toxic, considered a
7 toxic wasteland, and it had been originally a burn dump
8 site for Seattleites, and then it became an industrial
9 gasification plant that polluted for over 50 years in
10 the air, in the water, and in the soil. Luckily, they
11 had a visionary, Richard Haag, an architectural
12 landscape person that saw the way to redeem this area,
13 clean it up, much as what Boeing has been undergoing of
14 recent years, and converting it to a wonderful parkland
15 and preserving the gasification towers and boiler house
16 in part of the park. I think we need to do that, and I
17 support and recommend the conservation of our natural
18 resources.
19 Thank you.
20 MS. LOWE: Thank you. Anthony Zepeda, followed by
21 Greg Williams.
22 MR. ZEPEDA: Good morning. I'm a resident of
23 Calabasas, Anthony Zepeda.
24 I have four general points to make: The first
25 one is, is that there's a May 2012 DOE document that was

- 925-2 925-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.
- 925-3 925-3 DOE acknowledges your support for approaches to remediating Area IV and the NBZ that conserve natural resources. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.
- 926-1 926-1 DOE acknowledges your concern about compliance with the 2010 AOC. Please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

Section 3 - Public Comments and DOE Responses

3-1549

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 referenced in an earlier public comment called "Public
 2 Participation in the Development of Alternatives to be
 3 Considered in SSFL Area IV EIS." In that document,
 4 which is a document generated by DOE, it says that DO --
 5 that the -- that the AOC dictates -- well, first of all,
 6 it says that the DOE is committed to full compliance
 7 with both the 2007 and 2010 orders, the 2010 order being
 8 the AOC. It says, however, neither order dictates how
 9 DOE should accomplish the cleanup standards. So, DOE
 10 has committed to the AOC. It's signed it, and then it's
 11 also followed through in writing by saying that it would
 12 comply with it. I mean, the only caveat is how it will
 13 comply, not whether it would comply.

14 None of the four options, again, found in the
 15 Draft EIS would comply with the AOC. The Council of
 16 Environmental Quality has stated that there's no need to
 17 consider options that would violate the AOC. That's the
 18 Federal Council Environmental Quality. There's been no
 19 identification of any regulatory or statutory basis for
 20 violating the AOC, and there's been no authorization by
 21 Congress to do so. DOE essentially says the -- the
 22 AOC -- and this is in the Draft EOS -- EIS -- would take
 23 too long to comply with, would be too expensive and
 24 difficult, but no where does it say it would be
 25 impossible.

926-1
cont'd

926-2 926-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. NEPA strongly encourages agencies to evaluate alternatives and not limit their consideration to one pre-selected course of action. In addition to a No Action Alternative in accordance with the requirements of NEPA, this Final EIS evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Recognizing that Section 8.0 of the AOC provides that the AOC may be modified by mutual agreement of the parties, DOE took the appropriate path of evaluating reasonable alternatives that identify different cleanup levels.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 The second point is truck routes. There is a
2 nearby rail station that would create a truck route that
3 would avoid houses, but for some reason that wasn't
4 considered in the Draft EIS, and there's no explanation
5 for why that wasn't considered.

6 Third, the Draft EIS in Appendix F, Page 16,
7 says that Area IV and the Northern Buffer Zone have
8 cultural resources, but all cultural resources
9 identified in the appendix state that they were
10 unevaluated by the National Register of Historic Places
11 or the California Register Eligibility, which means
12 nobody has identified these as cultural resources. This
13 is just a claim based on no -- no evidence or no
14 designation by a government agency.

15 The fourth point is that DOE in the Draft EIS
16 claims that a large portion of Area IV is culturally or
17 biological exempt. That ties into my third point, which
18 the cultural resources have been unevaluated. But
19 Appendix 13 also identifies sources that are not
20 provided by DOE in -- in the Draft EIS, and, therefore,
21 it's impossible for the public to comment.

22 (Clock timer ringing)

23 MR. ZEPEDA: These are 13 different sources.

24 MS. LOWE: Thank you, Mr. Zepeda. Greg Williams.

25 MR. WILLIAMS: I'd like to comment later in my --on

926-3

926-3 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

926-4

926-4 The designation of "Unevaluated" in Appendix F was employed because at the time the Draft EIS was published, the State Historic Preservation Officer in the Office of Historic Preservation had not completed their evaluation of DOE's eligibility determinations for any of the documented archaeological sites. These eligibility designations have been updated in this Final EIS. DOE, as the Federal agency responsible for complying with Section 106 of the National Historic Preservation Act (NHPA), considers some of these sites to be eligible for listing on the National Register of Historic Places (NRHP), which confers the same status (i.e., eligible sites are protected) as actual listing on the NRHP (36 CFR 800.16(l)(2)). Determinations of eligibility are based on evidence collected during archaeological survey, and through laboratory analyses of artifacts or other evidence. These analyses have been completed by archaeological professionals (defined as meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology and Historic Preservation (36 CFR 61)). Some of the sites may also be eligible for protection under NHPA (even if not listed on the NRHP) because of their status contributing to an extensive traditional cultural property or historic district (please refer to Chapter 3, Section 3.11.2.3.4). Final decisions on exemptions for cultural resources will be made in consultation with DTSC, the Office of Historic Preservation and consulting parties. Please see Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent" of this CRD, which describes the process that will be used to determine exemptions. DOE is not trying to exempt areas from cleanup that are not eligible for such exemptions. Not all cultural resource-related sources cited in this EIS are available through the EIS website. Some of these contain confidential site information that may not be released to the general public. Qualified members of the public may obtain this information at the South Central Coastal Information Center of the California Historical Resources Information System.

926-4

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 this.

2 MS. LOWE: Okay. Michael Rincon, followed by

3 Leanna Brand, followed by Stephanie McIntyre.

4 MR. RINCON: Name's Mike. Good afternoon,

5 everyone. My name is Mike Rincon. I have a state

6 agency in Santa Cruz and a local from the area.

7 I'm also deeply upset that DOE has broken its

8 legally binding obligations for a full cleanup of SSFL

9 and now wants to leave in place, not clean up, vast

10 amounts of contamination it created over the decades of

11 an environmentally irresponsible practices at SSFL. It

12 appears that DOE's environmentally irresponsibility

13 continues.

14 At the heart of DOE's Draft EIS is a

15 breathtakingly false claim that leaving the radioactive

16 and toxic chemical contamination would produce no risk.

17 It makes that claim in an extraordinarily dishonest

18 assertion that it would clean the site up to risk-based

19 screening levels for suburban residential use and that

20 the risk would be one in a million or 10 time minus six.

21 And you've heard today the bald-faced lie the

22 DOE's options two and three are following the DTSC

23 approved Standardized Risk Assessment Methodology or

24 SRAM, but it turns out that all this is completely

25 false. A tiny footnote on Page S-31, number 22 of the

927-1

927-1 Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information related to your comment, including a discussion of how the Cleanup to AOC LUT Values Alternative incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background or levels based on laboratory capabilities (AOC LUT values).

927-2

927-2 In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLS based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Residential Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 DE -- the DEIS Summary indicate the DOE is not, in fact,
2 using a suburban residential risk-based cleanup levels
3 from the SRAM but has left out the major required
4 exposure pathways and in the end using values that are a
5 thousand -- sorry -- that are a thousand times higher
6 than the standard suburban residential goals. In other
7 words, the levels of the contaminants DOE proposes to
8 leave are higher -- a thousand times higher than would
9 be the case were they to use a correct suburban
10 residential risk-based screen levels.

11 They only consider -- sorry -- they only
12 conservative -- consider the trivial portion of that
13 risk, gainsly -- gainful underhand and leaving out the
14 required main risk they are taking, and how it won't
15 work to me, and I'm throwing it in your back yard, and
16 where the contaminate gets into their body and stays
17 there for a long, long time, damaging genetic material
18 of cells and producing cancers.

19 To show how false DOE claims I've noticed are,
20 one need really look at the detailed risk assessments
21 prepared by Boeing for contaminated portions of Area
22 III, which is about DOE's Area IV. One facility which
23 actually lies in part of the area, the end part in Area
24 IV is assimilated by Boeing to produce three times 10ths
25 of a million with one access cancer risk, in other

927-2
cont'd

927-3 927-3

The risks calculated by Boeing for Area III that resulted in high rates of cancer incidence were for the garden pathway for the Suburban Resident. As indicated in the Draft EIS and the SRAM (MWH 2014), the conservative treatment of the calculation of the risks (including the treatment of uncertainties) from the indirect pathway result in high risk values for this pathway. A garden pathway was not used in the RBSLs for the EIS, as residential development with garden is not a future land use for the SSFL property. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 words, three out of ten people would get cancer from the
 2 -- from the contamination.

3 Another area nearby has an astonishing 9.6
 4 10ths, 10 to the negative one, which is about 96 out of
 5 a hundred people will get cancer from the contamination.
 6 That is a million times higher than the risk -- sorry --
 7 that is a million times higher risk than the nonsense
 8 risk assessment DOE is putting forth. Even after
 9 cleaning up to the same standards DOE is now proposing,
 10 which violates the AOC, Boeing estimates would remain
 11 3,000 times higher than the -- than the one-in-a-million
 12 risk level that DOE claims, and that is far outside of
 13 the EPA/DTSC acceptable risk frame.

14 (Clock timer ringing)

15 MS. LOWE: Thank you, Mr. Rincon.

16 MR. RINCON: Thank you.

17 MS. LOWE: Did I pronounce that right? Rincon?

18 MR. RINCON: Rincon.

19 MS. LOWE: Okay. Thank you. Okay. Leanna Brand
 20 will be followed by Stephanie McIntyre, and then I will
 21 recall Martha Waite.

22 MS. BRAND: I don't have much to say except for my
 23 name is Leanna Brand, and I live here in Simi Valley for
 24 the last 20 years, and the political climate right now
 25 is making me very afraid that things are not going to

927-3
cont'd

easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLs that do not include the indirect garden pathway is appropriate for this future land use.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 get done.

2 I am for as much cleanup as they have agreed

3 to do in the most severe sense. And I don't really care

4 if you have to rebuild the roads to do it. I think you

5 should do it.

6 So, I'm concerned because of the regulations,

7 the Executive in Need of Scrutiny Act, which has just

8 been passed by Congress, and our Simi Valley

9 congressman, who was a co-sponsor to the bill and who

10 took campaign contributions from Boeing, I'm very

11 concerned that things are going to be let to go. If the

12 regulations, the Need of Scrutiny Act, passes the senate

13 and it's signed by the -- by the president, what it

14 means is any regulations that were set forth for

15 something this large, if they sit on congress's desk for

16 70 days without their looking at it, those regulations

17 become null and void. So, I think we should be very,

18 very concerned about this happening and this happening

19 right away.

20 Thank you very much.

21 MS. LOWE: Thank you. Stephanie McIntyre, and then

22 Martha Waite, and then I will recall Yvonne Brockwell.

23 MS. MCINTYRE: Hi. I'm Stephanie McIntyre. I'm a

24 resident of Simi Valley just for a year and a half.

25 But I was 10 years old and living in Canoga

- 928-1 928-1 DOE acknowledges your concern about a severe cleanup of the site. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- Please also refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of the transportation topic and DOE's response.
- 928-2 928-2 Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.
- 929-1 929-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Park when the nuclear meltdown occurred. I have
 2 relapsing-remitting multiple sclerosis. My best friend
 3 from that time period, who also played in the dirt and
 4 the gutters and everything with me, has lupas. There
 5 were numerous people who have since died of cancers,
 6 various kinds, lupas ones or brain cancers, from the
 7 same neighborhood.

8 The cleanup is not optional. The idea that
 9 it's not contaminating the groundwater or not spreading
 10 through the rest of our neighborhoods, I won't grow food
 11 in my ground here. I did when I lived far enough away
 12 near Burbank have a beautiful vegetable garden that I'm
 13 afraid to grow in Simi Valley. I have some container
 14 plants that don't come near what I used to enjoy
 15 picking.

16 But, this is not a joke, and it's -- it's
 17 impacting everyone in this valley and much of the San
 18 Fernando Valley, and I really want to see the cleanup
 19 happen. And, I really appreciate the people who came
 20 with all the specific data.

21 Thank you very much. Thank you.

22 MS. LOWE: Thank you. Martha Waite. Has Martha
 23 left? Yvonne Brockwell. Yvonne will be followed by a
 24 recall for a Brant Armbruster.

25 MS. BROCKWELL: Hi. Good afternoon. My name is

929-1
cont'd

929-2
929-3

929-2
cont'd

929-2 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

929-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 Yvonne Brockwell. I'm a resident of Thousand Oaks,
2 lived nearby in 1975 and played in the streams all of my
3 life and continue to play in the streams, as I
4 participate in the Assistance Science Program doing
5 streamline samplings in Malibu Creek water shed for the
6 past five years.

7 First of all, I'd like to say thank you to all
8 the watchdogs and activists in the room, and I look
9 forward to joining you in March and learning more.

10 I didn't even intend to speak today. I have a
11 vocal cord injury from surgeries to remove my thyroid
12 due to thyroid cancer. But after hearing from the woman
13 with the Historical Society, I composed this poem that I
14 wrote after attending a session a couple of years ago
15 that it was learned by the Ventura County epidemeologist
16 while we were reviewing the State of California Breast
17 Cancer Cluster Maps, so I hope you can -- maybe it gets
18 to you very quickly:

19 Cancer Forester. Affluent or effluent,
20 there's nothing in the room. Overlay some maps, you'll
21 see how we brought our doom. A great big tear of cancer
22 drops from every single seam. Where our weapons were
23 engineered and falsified with schemes of a race to
24 space, where manmade gods held the sons and crossed
25 the project with pride. We all cashed in, now, didn't

930-1

930-1 Thank you for your comment. It has been included in the Administrative Record for the EIS.

Section 3 - Public Comments and DOE Responses

3-1557

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 we, all innocence cast aside. What were we protecting
 2 when we lined our streams with filth, radionuclides,
 3 perchlorates, defy all the mother's milk. It's murder
 4 on the right, death be left the left, disease-me-unders.
 5 It doesn't take science. And there's no comfort in the
 6 birthing breast. We need this bed and we lie in it,
 7 every follicle and screening. Let her into your life
 8 and the pail is a dream. Who holds her head and her
 9 expensive wig as she vomits in. This toilet that we
 10 made of life now comes crashing in. Welcome to the
 11 backdoor payment floor.

12 Thank you.

13 MS. LOWE: Okay. Brant Armbruster. Alex Kim.
 14 Call Martha Waite one more time. Brant Armbruster.
 15 Alex Kim. Greg Williams, there is no more names in
 16 front of you.

17 MR. WILLIAMS: Well, I'll do it right quick.

18 MS. LOWE: I'm sorry?

19 MR. WILLIAMS: Well, my name is Greg Williams, and
 20 I had no intention of speaking here today. I just came
 21 here. I didn't want to be denied the opportunity to
 22 speak.

23 I think that it's wrong that we find ourselves
 24 in this position today. Rocketdyne had received federal
 25 moneys to, you know, do great things for our nation, and

930-1
cont'd

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 it seems that the DOE has got -- is using government
2 money. I think that -- that the DOE should be
3 responsible to clean up their mess here in our cities
4 locally. I think it's wrong for them to try to, you
5 know, deny a hundred percent cleanup or their
6 contractual obligations to the parties due to them in
7 2010. Our -- our communities have been torn apart by
8 lots and lots of various cancers and clusters that's
9 been enumerated here today.

10 I think that we should -- it's just deplorable
11 to think that Donald Trump is going to try to, you know,
12 eliminate -- he's got some kind of a crony in there
13 that's going to try to eliminate the EPA and diminish
14 the effect that -- the federal responsibility for these
15 cleanups. It's -- it's criminal. And, you know, we, as
16 people in Simi Valley and other communities around the
17 Valley, should, you know, rally around this and rise up,
18 and, you know, force the government to own up to their
19 own errors and clean up this mess for everyone's sake.

20 Thank you.

21 MS. UNIDENTIFIED: Very good.

22 MS. LOWE: Thank you. I have no more names on the
23 list. This hearing was scheduled to go until noon. We
24 will take a recess until someone else signs up. I will
25 close the meeting at noon if no one else has registered

931-1

931-1 DOE acknowledges your concern about a 100 percent cleanup of the site in accordance with the 2010 AOC. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

931-2

931-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

931-3

931-3 Thank you for your comment. Because the comment/statement is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

Comments from the Simi Valley, California Public Hearing (February 18, 2017)

1 to speak.

2 (Recess Taken)

3 MS. LOWE: Let me have your attention, please. I'm

4 going to call the three people that I called already

5 that have not come taken the opportunity. Martha Waite.

6 Brant Armbruster. Alex Kim. Okay.

7 On behalf of the U.S. Department of Energy,

8 I'd like to thank you very much for your time and

9 attention today. Let the record reflect that it is now

10 11:58 a.m. All registered speakers have been called

11 upon to speak. The project team looks forward to

12 working with you throughout the process. We will now

13 adjourn this meeting.

14 Thank you so much for coming today.

15 (Whereupon, the Public Hearing adjourned

16 at 11:58 a.m.)

17

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19

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Comments from the Simi Valley, California Public Hearing (February 18, 2017)

REPORTER'S CERTIFICATION

I, PHILLIP DEAN ORR, C.S.R. No. 7656, Certified
Shorthand Reporter, certify:

That the foregoing proceedings were taken
before me at the time and place therein set forth,
at which time the witness was put under oath by me;

That the testimony of the witness and all
objections made at the time of the examination were
recorded stenographically by me and were thereafter
transcribed;

That the foregoing is a true and correct transcript
of my shorthand notes so taken.

I further certify that I am not a relative or
employee of any attorney or of any of the parties, nor
financially interested in the action.

I declare under the penalty of perjury under
the laws of the State of California that the
foregoing is true and correct.

Dated this 22nd day of February, 2017.

PHILLIP DEAN ORR, C.S.R. No. 7656

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

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PUBLIC HEARING RE:
DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
REMEDIATION OF AREA IV AND THE
NORTHERN BUFFER ZONE OF THE SANTA SUSANA FIELD
LABORATORY

TUESDAY, FEBRUARY 21, 2017
AIRTEL PLAZA HOTEL-GULFSTEAM BALLROOM
7277 VALJEAN AVENUE
VAN NUYS, CALIFORNIA 91401
6:06 P.M.

REPORTED BY: PHILLIP DEAN ORR, CSR NO. 7656

FILE NO. : 148218

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

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26	February 21, 2017, Van Nuys, California, 6:06 p.m.	

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 * * * * *

2 THE REPORTER: Go ahead. We're on the record.

3 MS. McFADDEN: Hi. My name is Rita McFadden.

4 We've lived in the Knolls area of Simi Valley for about

5 12 years, and I have a son who just turned 18, and he

6 was diagnosed with T-cell ALL cancer on August 23rd this

7 year and -- last year -- sorry -- 2016, and he is

8 struggling for his life right now, going through

9 chemotherapy. Today, we found out that he's going to

10 have radiation therapy in the next month. We're all

11 scared. He's had setbacks. We found out when we

12 checked him into the emergency room when he was -- the

13 day that he was set to get treatment, that a lot of kids

14 in Simi Valley were diagnosed with cancer because of the

15 meltdown and because of the toxins that were still --

16 that were never cleaned up from the site -- the field

17 site. It scares me to think that that's still going on,

18 that so many other families are going to have to endure

19 all that we've had to endure in seeing our son spend his

20 senior year of high school in the hospital hooked up

21 to -- and hooked up to chemo poisons, having blood

22 transfusions, platelet transfusions. It's been six

23 months of hell for him and our family. So, I hope they

24 clean it up.

25 THE REPORTER: Is that all you want to say, ma'am?

1000-1

1000-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

1000-2

1000-2 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 MS. McFADDEN: Yeah, that's it. Want to say
2 anything?
3 MR. McFADDEN: No.
4 (Whereupon, at 6:08 p.m., Ms. McFadden's
5 comment concluded, and there were no other comments in
6 the Open House.)
7 * * * * *
8 (Whereupon, at 6:31 p.m., the following Public
9 Hearing was held:)
10 MS. LOWE: Thank you so much for coming tonight.
11 My name is Wendy Lowe, and I'd like to welcome you to
12 this public hearing, which is being hosted by the U.S.
13 Department of Energy. DOE has prepared a Draft
14 Environmental Impact Statement, or EIS, to evaluate the
15 potential environmental impacts associated with cleanup
16 of Area IV and the Northern Buffer Zone at the Santa
17 Susana Field Laboratory. The goal of this public
18 hearing is to provide you, as members of the public,
19 with an opportunity to provide your comments on the
20 draft document for consideration by the Department of
21 Energy as the Department finalizes the Environmental
22 Impact Statement.
23 This public hearing is being held on Tuesday,
24 February 21, 2017 in the Gulfstream Ballroom of the
25 Airtel Plaza Hotel, located at 72777 Valjean Avenue in

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3-1565

Section 3 - Public Comments and DOE Responses

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Van Nuys, California. The time is now 6:31 p.m.
 2 I would like to point out a few housekeeping
 3 items before we get started. The restrooms are located
 4 through these doors, take a left, and as you walk
 5 towards the door to go outside, they're on your right.
 6 There's water available back here at the -- right at the
 7 edge of where the chairs are. The exits in the event of
 8 an emergency are located over here, go out, go either
 9 direction to get out of the buildings. And I also want
 10 to let you know that, although you took a ticket when
 11 you got into the parking lot, the arms will be up
 12 starting at 7:00 o'clock, so there will be no charge for
 13 parking. Feel free to leave this hearing at any time,
 14 but we request that you do so in a way that minimizes
 15 distraction. Please silence your mobile phones and
 16 refrain from any conversations in this room. Even back
 17 in the open-house area, folks, please keep your
 18 conversations to a minimum. (Indicating)
 19 Before we begin, I would like to introduce John
 20 Jones and Stephe Jennings from the U.S. Department of
 21 Energy. They will provide an overview presentation
 22 about the Draft EIS. Copies of the slides that John and
 23 Stephe will use for their presentation will be
 24 available on line after Tuesday. Hard copies are also
 25 available on the table immediately in coming into the

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 room to the right, so if you want hard copies of the
2 slides, that's where you can get them. After they're
3 presentation, I will review the ground rules for this
4 hearing and begin taking your comments.

5 John Jones has been the director of the U.S.
6 Department of Energy's Energy Technology Engineering
7 Center since 2011 and he has the overall responsibility
8 for completing the remediation at the site.

9 MR. JONES: Thank you, Wendy, and good evening. My
10 name is John Jones, and as Wendy stated, I am the
11 director of the Energy Technology Engineering Center or
12 ETEC. On behalf of DOE, we would like to welcome you to
13 this public hearing. As Wendy mentioned, our purpose is
14 to gather your input to the Department's recently
15 released Draft Environmental Impact Statement for Area
16 IV and the Northern Buffer Zone of the Santa Susana
17 Field Lab. We will give you more background about the
18 Draft EIS and a brief history of operations at the site
19 in a moment.

20 I would like to first introduce my colleague
21 Stephie Jennings, who is the deputy director at our site
22 and will serve as the official hearing officer for this
23 evening's hearing. In addition, I would like to thank
24 the officers from the L.A. Police Department. Thank you
25 for attending today's meeting. They are here to ensure

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 that everyone feels comfortable and safe to provide your
 2 comments.

3 A little history on the site. After World War II
 4 the U.S. was interested in developing peaceful purposes
 5 for atomic energy. In 1953, the government approved a
 6 nuclear research and development center in Area IV of
 7 the Santa Susana Field Lab that would eventually be
 8 known as ETEC. During its operation years, the center
 9 housed and tested a number of small research reactors.
 10 Researchers also explored best practices in nuclear
 11 waste management and the use of liquid metals as a
 12 coolant for nuclear energy.

13 The research at this site was critical in
 14 developing our modern nuclear energy program that today
 15 helps power everything from our space program to
 16 electricity generation from the commercial nuclear
 17 reactors. This research resulted in localized releases
 18 of chemicals and radionuclides to the soil, bedrock and
 19 groundwater. The Draft EIS lays out a range of
 20 alternatives to address the contamination that remains
 21 in Area IV and the Northern Buffer Zone.

22 I want to speak with you briefly about our
 23 path so far. In 2003, DOE released an Environmental
 24 Assessment for Area IV and the Northern Buffer Zone
 25 following an internal review of remediation needs at the

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1 site. After a court challenge to this assessment, in
2 2007 a federal judge ordered DOE to complete an
3 Environmental Impact Statement per the National
4 Environmental Policy Act, NEPA. This order enjoined DOE
5 from relinquishing control over any portion of Area IV
6 until DOE had completed an Environmental Impact
7 Statement and issued a Record of Decision as required by
8 NEPA. Based on that finding, the court chose not to
9 address the plaintiff's claims related to the
10 Comprehensive Environmental Response, Compensation, and
11 Liability Act, CERCLA, and the Endangered Species Act,
12 ESA. As a result of this order, DOE began the EIS,
13 including extensive research, planning and public
14 involvement. DOE initiated a significant
15 characterization effort with multiple agencies,
16 including California Department of Toxic Substances
17 Control, or DTSC, and universities as well. DOE
18 provided \$41.5 million in funding to the Environmental
19 Protection Agency to perform a thorough radiological
20 study of the site. The EPA concluded this was one of
21 the most comprehensive technical evaluation studies of
22 low-level radiological contamination the agency had ever
23 conducted. This study, along with the chemical soil
24 studies performed by DOE with DTSC oversight, included
25 more than 10,000 samples, as well as installation of

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1 additional groundwater sampling wells and analysis of
 2 groundwater sampling results. The Draft EIS is the
 3 culmination of careful study by environmental and
 4 technical experts.

5 Throughout this process, DOE has made a significant
 6 effort to be transparent and involve many partners,
 7 including the community, in the important studies that
 8 were completed. Community involvement programs have
 9 included a work shop about the accident that occurred in
 10 1959 at the Sodium Reactor Experiment, Groundwater
 11 University workshops, the Soil Treatability
 12 Investigation Group, and the Community Workshops to
 13 Develop Alternatives.

14 I would like now to ask Stephe Jennings, the
 15 hearing officer for this meeting, to discuss the NEPA
 16 involvement process, and provide more information about
 17 the Draft EIS. Stephe.

18 MS. JENNINGS: Thanks, John, and good evening
 19 everyone. The National Environmental Policy Act, often
 20 called NEPA, is a law that designates a process that
 21 federal agencies must follow to consider the
 22 environmental effects of a project. In our case, the
 23 project involves remediation of Area IV and the Northern
 24 Buffer Zone. Under NEPA, federal agencies are required
 25 to assess and disclose environmental effects of a range

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1 of reasonable alternatives and present them to the
2 public in a Draft Environmental Impact Statement. The
3 analysis of alternatives in the Draft EIS is at the
4 heart of the federal environmental review process,
5 enabling the public to better understand the complexity
6 and trade-offs that will be involved in cleaning up the
7 site.

8 The process began with a Notice of Intent to
9 Prepare the EIS followed by an initial scoping period --
10 scoping and comment period. Since that time, DOE has
11 extensively studied and analyzed the site, resulting in
12 the Draft EIS, which was published on January 13, 2017.
13 There will be a 60-day public comment period, which will
14 end on March 14, 2017. At the end of the public comment
15 period, DOE will review all public comments, make
16 changes as appropriate, and publish a Final
17 Environmental Impact Statement. Following the Final
18 EIS, DOE will issue a Record of Decision for cleanup of
19 the site.

20 The Draft EIS analyzes the environmental
21 impacts of the Administrative Order on Consent or AOC
22 agreement and other alternatives that consider risk to
23 human health, and the protection of natural resources to
24 determine cleanup levels. This approach is consistent
25 with cleanup actions at other DOE sites and is in

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1 compliance with federal law. The comparative analysis
 2 of these alternatives allows stakeholders to understand
 3 the balance and trade-offs associated with the various
 4 options for site cleanup.

5 DOE remains committed to a site cleanup that
 6 is protective of the public and the environment. The
 7 Purpose and Need Statement you see on the screen here is
 8 also in the Draft EIS and represents a summary of why
 9 we're undertaking this process. In the Draft EIS, Area
 10 IV references the traditional area of operations and the
 11 Northern Buffer Zone, which includes 182 acres
 12 immediately adjacent to Area IV.

13 As I made mention, NEPA states that we must
 14 examine a range of reasonable alternative approaches to
 15 remediating the site. In developing this range, we
 16 considered input we received at public scoping meetings
 17 and concepts developed by participants in the community
 18 developed alternative workshops. As required by NEPA,
 19 each alternative was considered thoroughly and potential
 20 environmental impacts from each alternative were
 21 analyzed.

22 I want to briefly explore the alternatives in
 23 the Draft Environmental Impact Statement, starting with
 24 the soil remediation alternatives. You will note on
 25 this summary slide that there are four alternatives,

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1 beginning with the No Action, which is required as a
2 baseline.

3 Beginning on the right, you'll see first an
4 alternative we labeled "Cleanup to AOC Look-Up Table
5 Values," which adheres to the levels in the agreement
6 signed in 2010 by DOE. Under this alternative, DOE
7 would remediate soil in Area IV and the Northern Buffer
8 Zone to meet the chemical and radionuclide clean-up
9 look-up table values established in accordance with the
10 2010 AOC. DOE would start at one side of the site and
11 proceed across Area IV and the Northern Buffer Zone,
12 removing soil at any location that exceeds a look-up
13 table value. An estimated 933,000 cubic yards of soil
14 would be removed from the site, assuming that the
15 proposed cultural and biological exemptions are approved
16 by US Fish and Wildlife Service, California Department
17 of Fish and Wildlife, the State Historic Preservation
18 Office, and ultimately, DTSC. The planning estimate for
19 soil removal and backfill is approximately 115,000 truck
20 trips over at least a 10-year period.

21 Second is the Cleanup to Revised Look-Up Table
22 Values. Under this alternative, a revised set of look-
23 up table values would be established for chemicals.
24 Cleanup levels for radionuclides would remain the same
25 as those under the Cleanup to AOC Look-Up Table Values

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1 alternative. This Revised Look-Up Table would evaluate
 2 a reduced list of chemicals. These are chemicals
 3 believed to cause a concern for human health at the site
 4 based on the extensive site studies John mentioned
 5 previously. If the soil in a particular area exceeded
 6 the Revised Look-Up Table Value for any chemical or the
 7 AOC -- AOC Look-Up Table Value for a radionuclide, the
 8 soil would be removed. Approximately 192,000 cubic
 9 yards of soil would be removed under this alternative.
 10 The planning estimate for soil removal and backfill is
 11 approximately 23,800 truck trips over a two and a half
 12 year period. Like the AOC alternative, biological and
 13 cultural resources would be protected, while also
 14 protecting the public and the environment.

15 Third is the Conservation of Natural
 16 Resources. This approaches cleanup using a risk-based
 17 analysis which is consistent with DOE cleanup sites, as
 18 well as Superfund cleanup sites across the country. DOE
 19 would clean up soil to a level that would protect human
 20 health by removing soil with concentrations of chemicals
 21 or radionuclide that exceed criteria established using a
 22 risk assessment process. Concentrations of
 23 contamination would be averaged over a defined risk
 24 assessment unit in accordance with standard practice for
 25 cleanups across the country. This alternative would

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1 reduce risk to the public and the environment, yet
2 conserve natural resources by disturbing less land than
3 the other alternatives, thereby reducing the potential
4 of impacting visual, biological, cultural, and water
5 resources. An estimated 148,000 cubic yards of soil
6 would be removed from the site within a two-year time
7 frame. The planning estimate for soil removal and
8 backfill is approximately 18,400 truck loads. Like the
9 first two alternatives, biological and cultural
10 resources would be protected, while also protecting the
11 public and the environment.

12 I would like to talk in more detail about the
13 difference between alternatives in terms of soil volumes
14 proposed for removal. As I mentioned on the last slide,
15 the Conservation of Natural Resources alternative
16 approaches cleanup using a risk-based analysis. A
17 document called the "Standardized Risk Assessment
18 Methodology" was approved by DTSC to serve as the
19 technical basis for conducting human health and
20 ecological risk assessments for cleanup on other
21 contaminated land at the Santa Susana Field Laboratory.
22 This methodology establishes a cleanup threshold for
23 cancer causing chemicals based on ensuring that
24 remaining contaminant concentrations result in less than
25 one additional cancer case per 1,000,000 people. It

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1 also establishes a cleanup for non-cancer causing
 2 chemicals based on a level that is considered non-toxic.
 3 More information on this can be found in Appendix J of
 4 the Draft Environmental Impact Statement.

5 Under the Administrative Order on Consent
 6 Cleanup, soil represented by all colors of trucks as
 7 depicted on this slide would be removed. The Draft
 8 Environmental Impact Statement uses the most currently
 9 approved version of the Standardized Risk Assessment
 10 Methodology to assess the soil conditions on the
 11 DOE-controlled portion of the property. The -- this
 12 partial red truck represents the soil that exceeds AOC
 13 Look-Up Table Values for radionuclides only. The yellow
 14 or orange trucks represent soil that would be removed
 15 because chemicals exceed a risk threshold using the
 16 methodology described in the Standardized Risk
 17 Assessment Methodology. As you can see, these soils are
 18 removed under all three action alternatives. This
 19 removal would reduce the risk to human health from any
 20 remaining soil contamination to less than one cancer
 21 incident per 1,000,000 people. It also ensures that
 22 remaining chemicals were not toxic in accordance to the
 23 methodology.

24 The blue trucks represent the volume of soil
 25 that would be removed using the revised look-up table

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1 values for chemicals as described in the previous slide
2 in the Administrative Order on Consent look-up table
3 values for radionuclides. The green trucks represent
4 741,000 cubic yards of soil that would be removed
5 because they exceed the Administrative Order on Consent
6 look-up table values for chemicals alone.

7 The largest reduction in risk to a future
8 on-site user comes from the removal of the soil
9 represented the by the red and yellow/orange trucks.
10 There would be an additional reduction in risk from
11 removal of the soil represented by the blue trucks.
12 There is a much smaller .3 percent reduction in risk
13 from removal of the soil represented by the green
14 trucks. All of these soil removals have potential
15 associated impacts relative to dust and vehicle
16 emissions, truck traffic, road deterioration, vehicle
17 accidents, fatalities and worker injury, as well as
18 potential impacts to cultural and ecological resources
19 that increase proportionately to the amount of soil
20 removed.

21 For a more detailed discussion of this
22 information, you can refer to Chapter 4 and Appendix J
23 of the Draft EIS.

24 This slide shows the alternatives for
25 groundwater remediation. Through extensive

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1 characterization, we are confident that groundwater
 2 contamination remains on site for DOE's responsibility.
 3 However, we know that it is important to develop a plan
 4 to address groundwater contamination. The Draft EIS
 5 analyzes a no action alternative, as required. It also
 6 analyzes active treatment technologies and monitored
 7 natural attenuation, which means natural processes that
 8 decay and degrade materials over time.

9 Finally, this slide outlines the building
 10 remediation options. As we mentioned earlier, only 18
 11 buildings remain on the site. The Draft EIS proposes
 12 only two alternatives relative to these buildings: a
 13 baseline no action alternative, similar to what we've
 14 described above, or complete removal of the remaining
 15 structures.

16 Collectively, the Draft EIS analyzes the
 17 environmental and community impact of remediation
 18 options including preservation of historical and
 19 cultural resources, wildlife conservation, impact on
 20 roads and local communities, and length of cleanup,
 21 among many other factors. Every DOE EIS must consider
 22 the resource areas listed on this slide. As with any
 23 project of this size, there are complex factors that go
 24 into the decision-making process. The final decision
 25 will have to balance many factors.

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1 With that overview of the Draft EIS, I want to
2 briefly recap next steps. The 60-day public comment
3 period started on January 13th, which means interested
4 parties have until March 14 to provide comments. This
5 can be done at this hearing tonight or on our website,
6 www.SSFLAreaIVEIS.com. Public input is an important
7 part of shaping the Final EIS and eventually the path
8 forward.

9 Once the Final EIS is complete, DOE will
10 publicly release all of the comments that were received
11 and our responses to those comments. We also will
12 publish a notice of the EIS's completion in the Federal
13 Register. The final step will be to publish a Record of
14 Decision no sooner than 30 days after the Final EIS is
15 made publicly available. With that, I would like to
16 turn the microphone back over to Wendy so we can hear
17 your comments. Thank you.

18 MS. LOWE: Thank you, John and Stephe. As the
19 moderator, it's my job to make sure that this meeting is
20 conducted in a respectful manner and that as many people
21 as possible have a fair opportunity to provide oral
22 comments.

23 Please understand that DOE will not be
24 responding directly to any comments during the rest of
25 this meeting; however, your comments will be considered

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1 in the finalization of the Environmental Impact
 2 Statement. All comments will be given equal
 3 consideration, regardless of whether they are submitted
 4 orally or in writing.

5 Some of you may have had the opportunity to
 6 attend the open house which was in the back of the room
 7 and started at 6:00 p.m. this evening. If you did not
 8 do that, please be aware that the information that was
 9 provided will also be posted on the EIS website, and
 10 there are hand-out copies of all of the posters in the
 11 back of the room. They'll be available until this
 12 meeting ends tonight. If you did attend the open house,
 13 it's important for you to understand that any
 14 conversations that you had in the open house area were
 15 not recorded and will not be included as formal comments
 16 unless you spoke with the court reporter. I believe
 17 there was one person that talked to the court reporter.
 18 All your comments were not recorded. If you said
 19 something in the open house that you want DOE to
 20 consider while finalizing the Environmental Impact
 21 Statement, please restate your thoughts either from the
 22 podium tonight or in writing.

23 I'd like to emphasize that oral comments from
 24 the podium is only one way that you can provide comments
 25 during the public comment period. If you have prepared

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1 written comments that you would like to submit for the
2 record, you are welcome to leave those with us tonight.
3 There is also a public comment form that looks like
4 this. It's available at the back of the room at a
5 public comment area. So, if you would like to fill that
6 out and leave it, that's fine. You can either leave it
7 on the comment tables or at the registration table.

8 Let's see. The information on how to submit
9 written comments after tonight's meeting is available.
10 It's on a handout. It's a "Making your voices heard"
11 how-to comment. If you pick that up, it's got all the
12 information that you need for submitting a comment later
13 after tonight.

14 All comments that are received during the
15 public comment period, which will end on March 14th,
16 2017, will be given equal consideration. And all
17 comments that are received during the public comment
18 period will be included in the Final Environmental
19 Impact Statement. If you are not already on the mailing
20 list, you can sign up for that mailing list at the
21 registration table. And everyone that's on the mailing
22 list will be notified when the Final Environmental
23 Impact Statement is published.

24 If you are interested in providing comments
25 tonight, you must sign up to do so at the registration

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1 table, and there's a card that looks like this, and
 2 there's a little box at the bottom you can check if
 3 you're interested in providing comments. So, if you
 4 haven't signed up yet, you're welcome to go back to the
 5 registration table and sign up to speak.

6 Phillip Orr, up here in the front of the room,
 7 is our court reporter this evening, and it's Mr. Orr's
 8 job to provide a complete and accurate transcription of
 9 this hearing. I've asked him to let know if he is
 10 having trouble hearing or understanding you.

11 I would point out that there maybe people
 12 recording this meeting. Because it's a public meeting,
 13 we are not able to prevent that. We did want you to
 14 know that the only recording the DOE is making is the
 15 transcription that is being prepared by the court
 16 reporter.

17 Now I will go over the ground rules for this
 18 meeting:

19 To allow sufficient time for everyone to
 20 speak, oral comments will be limited to three minutes
 21 per speaker. All comments will be provided by
 22 individuals and no one will be allowed to share their
 23 time with other people. Each person will be allowed to
 24 speak only once.

25 We recognize that three minutes is a brief

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1 amount of time, and we strongly encourage people to
2 provide more detailed comments in writing to ensure that
3 all of your thoughts, concerns, and suggestions can be
4 fully captured in the record.

5 I will hold up signs to let you know how
6 you're doing on your time. I have a 30-second warning
7 and then I have a "Stop." So, I'll hold these up to
8 give you an indication on how you're doing on time. If
9 you're speaking after your three minutes or if you're
10 still speaking after your three minutes are up, I will
11 ask you to conclude your remarks and then I will call
12 the next speaker to begin. Please understand that if I
13 do have to cut you off, it's only because it's my job to
14 make sure that everyone who wants to speak tonight has
15 a fair opportunity to do so.

16 I did want to let you know that we have a
17 couple of children that are going to be making comments
18 tonight, and I'm going to call them first. Otherwise,
19 I'll be calling on people in the same order in which
20 they signed up. We are scheduled. The announced time
21 of this meeting to end was 9:00 o'clock. We presently
22 have -- it depends how, you know, people go. But right
23 now we're scheduled to run out of time about 9:00. We
24 have confirmed that the DOE officials are willing to
25 stay late, so if we have additional people that still

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1 want to speak after 9:00 o'clock, we will go long, but
 2 we will conclude as soon as we call everyone that wants
 3 to speak once. I'm also going to take a break at 8:00
 4 o'clock to allow the front of the room to run to the
 5 restroom.

6 So, I'll be calling several people at a time
 7 to let you know when your turn is coming up. We have
 8 just one microphone tonight. It's in the middle of the
 9 room. So, when you know your turn is coming up, you
 10 might start making your way towards the microphone so
 11 that we can keep moving along efficiently.

12 When I call your name, please step forward to
 13 the microphone and speak clearly and directly into the
 14 microphone. Begin by stating your name and the name of
 15 any organization that you might be representing in an
 16 official capacity tonight. Your three minutes will
 17 begin at that point.

18 One final request that I would like to make of
 19 you tonight: I know some of you have strong opinions
 20 about the cleanup program at Santa Susana Field
 21 Laboratory. The point of a public comment meeting is to
 22 give each of you an opportunity to provide your comments
 23 to the Department of Energy about the Draft
 24 Environmental Impact Statement.

25 We're grateful to you for taking the time out

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1 of your busy schedules to attend this public meeting and
2 for your ongoing interest in the cleanup at Santa Susana
3 Field Laboratory.

4 Regardless of your position, I will would be
5 grateful for your help in making sure that everyone who
6 speaks tonight is treated with respect, as I know you
7 will appreciate when it is your turn to speak.

8 Profanity and shouting will not be tolerated.
9 Interruptions and outbursts will slow things down, and I
10 will control the hearing process to make certain that
11 everyone who wants to provide comments is able to share
12 their comments in a respectful setting. Obviously, any
13 interruptions slow the process and will limit the number
14 of people that will be allowed to speak.

15 So, with that, we will begin taking comments.

16 MS. UNIDENTIFIED: Question. Excuse me. I have a
17 question. What about people who have difficulty getting
18 up to speak into the mic? Is there a way for someone to
19 bring the mic to them?

20 MS. LOWE: We prefer that they make their way to
21 the mic. Mike can take -- can we take it out of the
22 stand? Can that be done? We'll -- we'll work with you.
23 Okay. We'll make it work. Okay?

24 Okay. So, Melissa Bumstead and Grace Bumstead
25 are going to go first, and they will be followed by Ryan

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1 Compton and Maggie Compton.
 2 MS. BUMSTEAD: Hi. My name is Melissa Bumstead. I
 3 live in West Hills. My daughter was diagnosed with a
 4 rare form of leukemia in 2014. These are my children.
 5 I brought a map tonight -- I brought a map tonight of
 6 all the pediatric cancer cases that I personally know
 7 of, because the California Cancer Registration does not
 8 police statistics about pediatric cancer care; however,
 9 I'm well aware that this map cannot definitively prove
 10 that we have a pediatric cancer cluster. I'm more than
 11 aware that this map can't give me the answer that I'm
 12 looking for to know if our environment is safe.
 13 (Indicating)
 14 THE REPORTER: Higher.
 15 MS. LOWE: Please slow down just a bit for the
 16 court reporter.
 17 MS. BUMSTEAD: Sorry.
 18 THE REPORTER: Go ahead.
 19 MS. BUMSTEAD: We'll do. So what this map does
 20 show me, is that we need more answers before we assume
 21 that the Santa Susana Field Lab is safe. Children's
 22 bodies are much more sensitive and they react
 23 differently to substances and chemicals than adults.
 24 Their bodies are different, and that's why the studies
 25 done on adult cancers around the site are not

1001-1

1001-1

DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD regarding your concern about a complete cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Also please see, Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children in Los Angeles and Ventura Counties (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. The establishment and funding of additional epidemiological studies are beyond the scope of this EIS.

1001-1
cont'd

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1 sufficient. To date, there's not been a study of
2 childhood cancer in our community. My map shows that
3 over 35 children who live within 20 miles of the site
4 who have been diagnosed within the last five years.
5 There are 14 children diagnosed before 2010. Just
6 today, I was alerted to four more children in our area
7 with cancer, and I feel strongly there are more,
8 especially with the Spanish speaking population. Many
9 of the cancers on the map are extremely rare, less than
10 one in a million in my daughter's case. I wish more
11 studies on children had been done before the DOE
12 responds to the discussion, but without that knowledge
13 at hand, I ask that the Department of Energy to fill
14 its promise to a complete cleanup so that parents like
15 myself won't need to worry that we're inadvertently
16 exposing our children to toxins and radiation. I'm
17 afraid that the Santa Susana Field Lab is responsible
18 for our children's cancer, and I cannot bear to attend
19 another child's funeral. Please keep your promises.
20 Please clean up 100 percent of the Santa Susana Field
21 Lab.
22 Thank you.
23 MS. LOWE: Thank you, Ms. Bumstead. And this is
24 Grace? Hi, Grace.
25 GRACE BUMSTEAD: Sit right there. There. My name

1001-1
cont'd

1001-2

1001-2 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Section 2.2, specifically addresses cleanup in accordance with the 2010 AOC.

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1 is -- my name is Grace. I live -- I live in West Hills.
 2 I am seven years old. Okay. I have cancer. I want to
 3 help our city get all that we need by getting rid of all
 4 the chemicals and the nuclear waste because we don't
 5 won't to have to do this again. I don't want to live
 6 close to chemicals in the mountain -- mountains. I want
 7 to be as safe as anyone that is safe. I want to help
 8 other people to be safe. I don't want to get cancer
 9 again because cancer was very -- a very scary thing when
 10 I was in the -- the hospital, and I was -- had to get GI
 11 tubes and pokes, and 10 times or more than that, and it
 12 wasn't very fun. And you don't want cancer either. So
 13 we want to get all the load that we can get. Please
 14 clean up this chemicals in the mountains.

15 MS. LOWE: Thank you, Grace, very much. Okay.
 16 Ryan Compton and Maggie Compton, and they will be
 17 followed by Paul Poirier.

18 MS. COMPTON: Hi. My name is Maggie Compton, and
 19 this is my son Ryan. Ryan is also a pediatric cancer
 20 survivor. Ryan is a two-time pediatric cancer survivor.
 21 He had leukemia XY. And, lots of scientists,
 22 angiologists say they're all about radionuclides,
 23 groundwater contamination, nuclear meltdowns, you name
 24 it.

25 I am surprised that when I moved to Simi in

1002-1

1002-1 DOE acknowledges your concern and preference for cleanup of SSFL. Please refer to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Also please see, Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. Each of the action alternatives evaluated for cleanup of Area IV and the NBZ is protective of the environment and the health and safety of the public.

1002-2

1002-2 DOE acknowledges your concern about cleanup of chemicals in the mountains. It is DOE's mission to remediate sites to ensure that they are protective of human health and the environment. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

1003-1

1003-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," of this CRD for a discussion of contamination in the area around SSFL and to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of causes and incidences of cancer and cancer clusters. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

1003-2

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 2008, I never heard about a nuclear meltdown because it
2 was just not wanting to be publicized. I -- I'm really
3 shocked, disgusted, dismayed. I can go on and on of
4 what's going when we bought our house in Simi.
5 Ryan has been cancer free now for six years.
6 He had a half a bone marrow transplant. He had to have
7 his life-time maximum dose of radiation over the course
8 of four days to prepare for him for the bone marrow
9 transplant to get rid of all the leukemia, which kept
10 coming back, and he became basically resistant to any
11 one of chemotherapy. He was sick from the time he was
12 22 months old until the time he was spotted to have. He
13 has pervasive learning disabilities.
14 He's going to speak, but I'm going to help him
15 because he's not as eloquent as Grace. He cannot read
16 like Grace, although he is probably twice as old as she
17 is.
18 Don't smile at me. I -- I don't want you to
19 smile at me. This is not a happy topic for me at all.
20 I doubt that you live in Simi Valley. I'm sure you guys
21 live in Colorado or Washington DC or somewhere where DOE
22 headquarters is located. There is -- know the DOE. I
23 used to work for scientists -- a group of scientists,
24 engineers that were all CalTech graduates. My ex-boss,
25 Lon Bell, was actually the keynote speaker at the

1003-2
cont'd

1003-2 DOE acknowledges your concern. Chapter 3, Sections 3.9.5 and 3.9.6, of this EIS contain a description of the 1959 SRE accident and the levels of radiation that were believed to have been released. Additional information can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html. DOE has not kept the SRE accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atomics International 1959). The accident was also described in detail in a reactor safety textbook, "The Technology of Nuclear Reactor Safety" published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html. Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html).

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in accordance with all regulatory requirements.

1003-3 There has been a lot of cleanup performed in Area IV. As discussed in Chapter 1, Section 1.3, of this Final EIS, DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). Most of these structures have been removed. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 conference of thermoelectrics every year in San Diego
 2 and other places.

3 So, unfortunately, I have really lost any
 4 sense of trust in what you say. I'm not interested in
 5 all this stuff that you basically try to explain to
 6 everyone because of the fact that, you know, the nuclear
 7 meltdown happened 58 years ago, I believe, in 1959, and
 8 they still haven't cleaned it up. We're still talking
 9 about it. I know there's a lot of older people here
 10 that have been coming here ever since the late '80s
 11 asking you to clean it up. You said that you were
 12 committed, that the DOE is committed to cleaning up.
 13 How long is it going to take you? 100 years? 58 years
 14 is too long. It's 58 years too long.

15 There's a map of cancer cluster in Simi
 16 Valley, in Moorpark, West Hills, all the surrounding
 17 areas. As you know -- I'm sure you're a scientist -- we
 18 have at least -- everything basically goes now, you
 19 know -- you know, you're testing these sites, but I'm
 20 not even comfortable --

21 (Clock timer ringing)

22 MS. COMPTON: -- with -- with growing fruit trees
 23 or much less drinking water.

24 (Clock timer ringing)

25 MS. COMPTON: What if we build our houses -- do we

1003-2
cont'd

1003-3

1003-1
cont'd

1003-1
cont'd

1003-1
cont'd

The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD which addresses steps that must be completed before cleanup can resume. Briefly, DOE must complete an EIS (this EIS) and issue a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 not -- okay.
2 (Clock timer ringing)
3 MS. COMPTON: This is my son, so he was sick for --
4 MS. LOWE: Ms. Compton, your time is up. Would you
5 like to let your -- have a seat, please?
6 MS. COMPTON: Yes. I want you to see what he went
7 through. I'm ashamed from one scientist to another that
8 you are not taking responsibility for your agency on
9 what they've done to the community here. And, with
10 that, I turn this over to my son. (Indicating)
11 MS. LOWE: Ryan, will you introduce yourself,
12 please?
13 RYAN COMPTON: My name is Ryan.
14 MS. COMPTON: How old are you?
15 RYAN COMPTON: I'm 11 years old.
16 MS. COMPTON: Were you sick when you were little?
17 RYAN COMPTON: Yes.
18 MS. COMPTON: What happened? Tell him and her.
19 They need to know. What happened to you when you were
20 little?
21 RYAN COMPTON: Uh --
22 MS. COMPTON: Say it. What did you have?
23 RYAN COMPTON: Leukemia.
24 MS. COMPTON: How many times?
25 RYAN COMPTON: Two times.

|| 1003-1
cont'd

|| 1003-1
cont'd

|| 1004-1

1004-1

DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. DOE's purpose in preparing this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 MS. COMPTON: Is it hard for you to read? Can you
 2 read like Grace?
 3 RYAN COMPTON: Uh, no.
 4 MS. COMPTON: "No" why? Because it's hard; right?
 5 RYAN COMPTON: Yes.
 6 MS. COMPTON: What do you want our government
 7 scientists -- what do you want our government scientists
 8 to do? Do you want them to protect us or to hurt us?
 9 RYAN COMPTON: Protect us.
 10 MS. COMPTON: So, what would you like to ask them
 11 to do with all the pollution that they left behind in
 12 Simi Valley? Ask -- tell them, too. Look at them.
 13 Sweetheart, what would -- look at them. What would you
 14 like to ask them to do?
 15 RYAN COMPTON: Please clean it up.
 16 MS. COMPTON: Why? Tell him. Look at him and look
 17 at her. Ask them again. Look at them in their eyes,
 18 sweetheart.
 19 RYAN COMPTON: Please clean up.
 20 MS. COMPTON: Why? Look at them. Tell them why.
 21 Why should they clean up? Tell them why.
 22 RYAN COMPTON: I have -- kids -- the -- the other
 23 kids like me, they used to be sick.
 24 MS. COMPTON: Do you want any other kids to keep
 25 getting sick --

1004-1
cont'd

1004-2

1004-1
cont'd

1004-2 DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Please also refer to Section 2.8, "Cancer and other Illnesses near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 RYAN COMPTON: No.
2 MS. COMPTON: -- with cancer? No; right? Is
3 pollution good for our earth?
4 RYAN COMPTON: No.
5 MS. COMPTON: Is pollution good for kids?
6 RYAN COMPTON: No.
7 MS. COMPTON: Is pollution good for human beings?
8 RYAN COMPTON: No.
9 MS. COMPTON: Does mommy let you drink water from
10 the tap?
11 RYAN COMPTON: Yes.
12 MS. COMPTON: From the tap?
13 RYAN COMPTON: No.
14 MS. COMPTON: What do we have? What do we have?
15 We have water filters, don't we?
16 RYAN COMPTON: Yes.
17 MS. COMPTON: Would you like to ask the scientists
18 here from the government to please protect children and
19 not hurt them? Ask them, please.
20 RYAN COMPTON: Please.
21 MS. COMPTON: "Please" what? Tell them.
22 RYAN COMPTON: Please --
23 MS. COMPTON: Tell them. Please protect --
24 RYAN COMPTON: -- protect --
25 MS. COMPTON: Who? Children; right?

1004-1
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 RYAN COMPTON: -- children.
 2 MS. COMPTON: And what else? What else is really
 3 important? Where do we live? We live on planet what?
 4 Earth. Do you love --
 5 RYAN COMPTON: Earth.
 6 MS. COMPTON: Do you love earth?
 7 RYAN COMPTON: Yes.
 8 MS. COMPTON: Yeah. We're going to the mountains
 9 this weekend; right?
 10 RYAN COMPTON: Yes.
 11 MS. COMPTON: Would you like for them to protect
 12 our mountains?
 13 RYAN COMPTON: Yes.
 14 MS. COMPTON: Our city?
 15 RYAN COMPTON: Yes.
 16 MS. COMPTON: Ask them. Ask them to please protect
 17 us.
 18 RYAN COMPTON: Please protect us.
 19 MS. COMPTON: Ask them to please clean up their
 20 mess. Do you want them to just -- do I let you leave
 21 your mess --
 22 RYAN COMPTON: No.
 23 MS. COMPTON: -- in your room? Okay. Can you
 24 please ask them to pick up their mess?
 25 RYAN COMPTON: Please pick up your mess.

1004-1
cont'd

1004-2
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 MS. COMPTON: Ask them.
2 RYAN COMPTON: Please pick up your mess.
3 MS. COMPTON: Is it nice --
4 RYAN COMPTON: No.
5 MS. COMPTON: -- to not pick up your messes? Is it
6 nice to leave messes that kill people?
7 RYAN COMPTON: No.
8 (Clock timer ringing)
9 MS. COMPTON: We would like to thank you.
10 RYAN COMPTON: Thank you.
11 MS. COMPTON: Can you hold this, please?
12 MS. LOWE: We thank you. I just want to make sure
13 that everybody understands that part of the testimony,
14 the reason we have the stand where we do, that the court
15 reporter does a lot of differentiating. So, from now
16 on, we're going to leave the microphone in the stand so
17 that the court reporter can do their job. Okay?
18 Okay. Paul Poirier will be followed by Denise
19 Duffield and then Sheldon Plotkin.
20 MR. POIRIER: I would like to thank you for having
21 this forum to allow to talk to you about the cleanup
22 over at the Santa Susana Lab. I spoke the other day in
23 Simi Valley, but I have a couple more things to tell
24 you. I didn't have enough time to tell you there.
25 Just for everyone else, I'm the past president

1004-2
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 of the Central Coast Green Building Council, which is
 2 the local chapter of the U.S. Green Building Council,
 3 representing Santa Barbara, San Luis and Ventura
 4 Counties.

5 One of the basic philosophies of the U.S. --
 6 MS. LOWE: And, back up. Could everybody please
 7 minimize the distractions in the back of the room? This
 8 gentleman has the floor. Try it.

9 MR. POIRIER: Thank you. So, one of the basic
 10 philosophies of the USBC is a balance of the health of
 11 the environment, of the people in the communities, and
 12 of the economy. And, our philosophy is that one of us
 13 don't have to thrive at the expense of the other. So,
 14 we're promoting green building, and we believe that will
 15 have a robust economy, and that people will be healthier
 16 if we're able to get all those things going.

17 We realize that some of the federal things
 18 happened at the Santa Susana Field Laboratory, things
 19 that you can be proud of, great knowledge and great
 20 scientific work produced at the laboratory, namely the
 21 U.S. flying to the moon. We expect the DOE to clean up
 22 the site so that we can be -- it can be celebrated by
 23 the communities, a monument to American ingenuity. Also
 24 I feel that in the past, the economy and striving to get
 25 to the moon may be took priority over the environment or

1005-1 1005-1

DOE acknowledges your concern about cleanup of SSFL. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 over the community, and risks were taken at the expense
2 of the community.

3 None of us -- many of my compadres -- I grew
4 up in what they call now West Hills, we used to not go
5 far to get to Chatsworth, lived there for 18 years.
6 Many of my friends have died of cancer. Six guys -- I
7 went to high school, when I graduated, high school class
8 of maybe 110 -- died in the last few years. As a kid,
9 many, many children that had known me from school had
10 leukemia when I was in grade school as well. I went to
11 the Valley Church in Topanga and Sherman Way. So, I
12 feel that maybe errand on the side of the environment
13 and the community is appropriate at this time. You may
14 say that the minimal cleanup in place of the toxins that
15 are there is adequate. But for us, we've paid the
16 price, and I'm -- I'm happy to pay the price, fighting
17 cancer, because we had to do those experiments to get
18 nuclear power to go to the moon. That's part of being
19 an American and being patriotic about what's going on.
20 But now we know better. Back in 1959, they didn't know
21 what would happen with those things. But we do know how
22 to clean it up, and now it's just a matter of money.
23 So, now it's really -- the economy's pointing to -- to
24 us back here. How much money was spent by Rocketdyne,
25 by the DOE or by NASA to do the experiments on the top

1005-2

1005-2 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

1005-3

1005-3 This Final EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It presents the potential near-term and long-term impacts so that the public and decision-makers can evaluate the tradeoffs between a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities and alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. Refer also to Sections 2.7, "Offsite Impacts," and 2.8, "Cancer and Other Illnesses Near SSFL," for information on the potential impacts in the vicinity of SSFL.

1005-4

1005-4 As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. Because the AOC cleanup is not the normal way DOE, EPA, or California DTSC performs soil cleanups, DOE evaluated the costs and benefits of

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 of that mountain? And, how much are we talking about
 2 doing a full cleanup to the benefit of the community and
 3 the benefit of the environment with the long-term
 4 effects of the cleanup benefiting the environment and
 5 the community? But maybe the short-term benefits are
 6 little inconveniences, some additional truck trips or
 7 maybe it's disturbance of some cultural resources. I
 8 think that the short-term impacts of full cleanup are
 9 far less than the long-term impacts on the community
 10 to --

11 (Clock timer ringing)

12 MR. POIRIER: -- take care of the people that are
 13 getting sick and getting cancer. So, the USGBC is
 14 supporting the whole cleanup of the site.

15 MS. LOWE: Thank you, Mr. Poirier. The next
 16 speaker will be Denise Duffield. Denise will be
 17 followed by Sheldon Plotkin and then Jose Quiroga.

18 MS. DUFFIELD: I've been waiting so I know my
 19 time's -- and the timers starts with my comment.

20 MS. LOWE: Okay. When you're ready.

21 MS. DUFFIELD: My name is Denise Duffield. I'm the
 22 associate director for Physicians for Social
 23 Responsibility Los Angeles, and I also serve as the
 24 coordinator of the SSFL Work Group. PSRA will be
 25 submitting technical comments in writing.

1005-4
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1005-3
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the AOC cleanup versus what is normally done (that is, a cleanup that is based on risk and future land use). That analysis demonstrated that the AOC cleanup would be much more expense and with minimal additional protection of public health and the environment. This EIS presents a comparative analysis of these alternatives and the impacts across various resource areas to allow people to understand the trade-offs associated with the various options for cleanup of SSFL Area IV and the NBZ. Each of the alternatives would be protective of the public and the environment.

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1 I was shocked this Saturday listening to John
2 Jones' comments in the Ventura County -- County Star
3 saying that DOE is upholding the AOC cleanup agreements,
4 that all of its counter alternatives are protective of
5 public health because "That's what we do." No, that's
6 not what you do.
7
8 What the DOE does is produce unnecessary and
9 dangerous nuclear weapons, create hazardous radioactive
10 and chemical contamination, make promises to clean it
11 up, and then break those promises, all across the
12 country, from Lawrence Livermore, to Rocky Flats, to
13 New Mexico, to Hanford, to Idaho, to Savannah River, to
14 Oak Ridge. What DOE does is to create a legacy of toxic
15 waste and contamination that impacts communities and
16 vital ecosystems, and what DOE's -- DOE's Office of
17 Environmental Management does is anything it can do to
18 avoid cleaning it up. No, DOE is not upholding the SSFL
19 cleanup agreement. Every single one of the alternatives
20 leaves contamination on site, which is prohibited in the
21 AOC. No, none of DOE alternatives are protective of
22 public health. DOE has manipulated the standards to be
23 thousands of times higher than what the EPA would allow.
24 No, DOE's not required by NEPA to look-it-up options in
25 an AOC. No, DOE's not fit to decide to clean up. That
decision's made by California's DTSC. No, DOE cannot

1006-1

1006-2

1006-3

1006-4

1006-5

1006-6

1006-1 The mission of DOE is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions. Additional information can be found at <https://energy.gov/>. As the largest environmental cleanup program in the world, DOE's Office of Environmental Management has been charged with the responsibility of cleaning up 107 sites across the country. To date, the Office of Environmental Management has made substantial progress in nearly every area of nuclear waste cleanup and completed cleanup at 91 of these sites. Additional information can be found at <https://energy.gov/em/office-environmental-management>.

1006-2 The Cleanup to AOC LUT Values Alternative complies with the 2010 AOC. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD. However, NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation, this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ, in a manner consistent, using risk assessment techniques, with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

1006-3 DOE did not 'manipulate the standards to be thousands of times higher than what the EPA would allow.' The EPA allows for assessments that use the projected end use of the property to determine the factors used in a risk analysis. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLS based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 exempt soil based on natural attenuation or biological
 2 exemption -- exemptions that are misrepresented. No,
 3 DOE does not get to frame the entire cleanup in terms of
 4 trucks versus contamination, especially when DOE refused
 5 to look at other routes and transportation methods.

6 The DOE will go to any length to avoid the
 7 cleanup, including secretly funding a front group that
 8 are opposing the cleanup. \$34,100.00 a year is all we
 9 know because DOE will not release the grant contractor
 10 and details. I'm sure we'll be hearing from some of
 11 these people today. You'll know who they are. DOE must
 12 stop funding people's health and clean up SSFL as
 13 promised and comply with the AOC to the letter.

14 Because DOE is not leveling with the public, I
 15 prepared a handout with just some of the information the
 16 public needs to know. Some people will hand that out
 17 right now. I encourage everyone to attend the March 8th
 18 meeting of the SSFL Group -- Work Group, and I would
 19 also add that please listen to the speakers. You don't
 20 need to read the handout now. I think it's important to
 21 hear what everybody has to say.

22 Thank you.

23 MS. LOWE: Thank you, Ms. Duffield. So, the next
 24 speaker will be Sheldon Plotkin, followed by Jose
 25 Quiroga, and by Betsey Landis.

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1006-7

1006-8

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Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Resident Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

1006-4 DOE respectively disagrees.

1006-5 DOE recognizes DTSC's authority over the cleanup at SSFL. DOE recognizes that DTSC needs to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC and DOE-prepared RCRA closure plans for building demolition.

1006-6 Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) regarding application of the 2010 for a discussion of this topic and DOE's response with regard to biological exemptions.

1006-7 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.

In accordance with NEPA, this Final EIS evaluates the potential impacts on a variety of resource areas, including traffic, human health, cultural and biological resources, socioeconomics, and environmental justice. Results of the analyses allow a comparison of potential impacts across all evaluated resource areas as well as the tradeoffs between the alternatives. The intent was not to frame the cleanup in terms of trucks versus contamination. But, it is true that the more soil that is removed from the cleanup site, the more transportation will be required. Leaving more soil, and consequently low concentrations of chemicals and/or radionuclides on site, reduces the number of truck trips necessary from the site. Conversely, removing the soil with low concentrations of chemicals or radionuclides, requires more truck trips from the site. The EIS shows that the transportation risks are very small; Chapter 4, Section 4.8.1 and Appendix H of this EIS provide details of the transportation risk analysis.

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1 MR. PLOTKIN: Okay. I'm Sheldon C Plotkin. I'm
2 appearing here on behalf of Southern California
3 Federation of Scientists, which has been involved for
4 nearly 40 years trying to get the DOE to take
5 responsibility for the contamination they created at
6 Santa Susana and clean it up.

7 I'm deeply concerned the DOE has now broken a
8 legally binding cleanup agreement it signed in 2010, and
9 is proposing leaving between 39 and 99 percent of the
10 contamination not cleaned up. DOE and its predecessor,
11 the Atomic Energy Commission, historically acted as if
12 they were above the environmental laws of the country
13 that apply to everyone else. They consistently broke
14 fundamental rules about protecting the environment,
15 ending up polluting soil, water, and air at scores of
16 nuclear facilities around the country.

17 Santa Susana elementary safety rules were
18 ignored. Four different reactors suffered accidents.
19 In 1959, one reactor released radioactivity.

20 A few months later, a different reactor
21 suffered a partial meltdown in which a third of the fuel
22 experienced melting. In that case, after an accident
23 which power ran out, the control exponentially -- they
24 could barely shut the reactor down, and they
25 inexplicably started it up again a couple of hours later

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1006-8 While the comment is not on the scope or content of this Final EIS, the following information is provided:

DOE has funded a number of stakeholder groups, including Teens Against Toxins, the SSFL Advisory Panel, Physicians for Social Responsibility, the Rocketdyne Cleanup Coalition, Committee to Bridge the Gap and the SSFL CAG. The SSFL CAG is an independent group, created under the State of California Health and Safety Code, approved by the DTSC and formed under guidance from the Udall Foundation, an independent Federal agency focused on environmental stewardship. The SSFL CAG began operating in 2013. The grant to the CAG was funded through local project funds in an effort to support community engagement. DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards.

1007-1 DOE has not announced that it intends to break the 2010 AOC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

1007-2 DOE conducted historic operations under the laws and regulations applicable at the time. DOE's Office of Environmental Management has been charged with the responsibility of cleaning up 107 sites across the country. To date, the Office of Environmental Management has made substantial progress in nearly every area of nuclear waste cleanup and completed cleanup at 91 of these sites. Additional information can be found at <https://energy.gov/em/office-environmental-management>.

1007-3 As indicated in Chapter 1 of this EIS, DOE acknowledges that past activities at SSFL resulted in chemical and radiological releases that impacted soils, buildings,

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1 without having been able to identify the cause of the
 2 problem. They ran it for another 10 days or so in the
 3 face of clear evidence of a failing reactor with
 4 radiation radiating higher than the monitors -- where
 5 were I -- monitors could record. Radioactive material
 6 was intentionally released into the environment for
 7 weeks, and then they lied about the accident and tried
 8 to cover it up.

9 Two other reactors had similar accidents.
 10 There were radioactive fires in the Hot Lab, which
 11 highly irradiated -- in which highly irradiated nuclear
 12 fuel was disassembled.

13 For decades they illegally burned radioactive
 14 and toxic chemical waste in open burn pits with the
 15 contamination released into the air over Simi Valley and
 16 polluted water -- and polluted water was dumped over the
 17 hillside to -- to a children's camp.

18 Finally, in 2010, DOE signed a legally binding
 19 agreement with California for a full cleanup, and now
 20 DOE has announced that it intends to break the agreement
 21 and leave dangerous contaminations on site when it will
 22 continue to migrate to off-site communities. This is
 23 unacceptable. DOE must live up to its cleanup
 24 obligations, carry out the cleanup agreement to the
 25 letter --

1007-3
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and groundwater. Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS contain information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. At the time of the accident it was estimated that the accident resulted in the release (over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. Additional information about the 1959 SRE accident can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html. DOE has not kept the SRE accident secret. The accident was reported to local and National media in an August 29, 1959 news release (Atomics International 1959). The accident was also described in detail in a reactor safety textbook, "The Technology of Nuclear Reactor Safety" published in 1964 (Thompson and Beckerley 1964). These and other documents related to operation of SRE can be found at http://www.etec.energy.gov/Library/Historical_Docs.html. Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). With respect to the statements regarding burning radioactive and chemical waste in open pits, the Former Sodium Disposal Facility was used from 1956 to 1978 to clean alkali metals (sodium and potassium/sodium mixtures) from metallic components and other materials, and also received chemical waste and radionuclides. The facility was remediated during the 1990s and released for unrestricted use (i.e., declared clean) in 1998 by the California Department of Health Services (now California Department of Public Health). Additional information can be found at http://www.etec.energy.gov/Operations/Support_Ops/FSDF.html.

With respect to the statements regarding polluted water being dumped over a hillside, studies have addressed whether radiological and chemical contaminants were present on the properties north of SSFL, including studies issued in 1992, 1994, and 1995 (see http://www.etec.energy.gov/Environmental_and_Health/Brandeis_Bardin.html). These studies led to cleanup activities on part of the American Jewish University Brandeis Bardin property, as well as the Boeing purchases of the areas of the property with the highest levels of contamination. These areas were incorporated into the SSFL site as the NBZ (DTSC 2017a). In May 2017, DTSC published its review of chemical and radiological data from the investigations that had been performed to date. From its review, DTSC concluded that: (1) levels of radionuclides on the Brandeis Bardin Campus appear to be within the natural background range; (2) levels of chemicals and radionuclides at the Brandeis Bardin Campus do not pose a threat to human health; (3)

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1 (Clock timer ringing)
2 MR. PLOTKIN: -- with no more games, no more false
3 statements, no more breach of public trust.
4 Thank you.
5 MS. LOWE: Thank you, Mr. Plotkin. Okay. Jose
6 Quiroga, followed by Betsey Landis, and then Alec
7 Uzemeck.
8 MR. QUIROGA: Hi. I am Jose Quiroga. I -- I come
9 here to this meeting for all sorts of reasons. The most
10 important thing is, because I live here in San
11 Fernando --
12 THE REPORTER: Okay. We're fine.
13 MS. LOWE: Yeah?
14 MR. QUIROGA: -- that it goes to the -- the
15 contamination. Second, I'm on the board of Physicians
16 for Social Responsibility, of which I've been fighting
17 for (Inaudible) --
18 THE REPORTER: (Shakes head)
19 MS. LOWE: Can you just slow down just a little bit
20 to help the court reporter?
21 THE REPORTER: Sorry. Sorry.
22 MS. LOWE: He's having trouble hearing you, so --
23 MR. QUIROGA: Huh?
24 MS. LOWE: The court reporter's having trouble
25 hearing you, so slow down just a little bit and -- and

1007-1
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contamination at SSFL does not pose a threat to Brandeis Bardin Campus users; and (4) the Brandeis Bardin Campus is safe for use by campers, visitors, students, faculty, administrators, and staff (DTSC 2017a). In addition, please see Section 2.7, "Offsite Impacts," of this CRD for a discussion of this topic and DOE's response. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

Section 3 - Public Comments and DOE Responses

3-1603

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1 you could speak --

2 MR. QUIROGA: Yeah.

3 MS. LOWE: -- towards the --

4 MR. QUIROGA: Okay. My name is Jose Quiroga. I'm

5 coming here for the reason, and the basic part is

6 because I'm living here in San Fernando Valley. I live

7 below -- estate close to the site of contamination.

8 Second, I am a member of Physicians for Social

9 Responsibility, and this is one of the organizations

10 that's been fighting for -- now for at least -- for many

11 years. And, the important thing I said in the

12 introduction, that the contamination -- the

13 contamination of -- of -- is -- the environmental

14 impact, and I'm feeling that the radionuclides

15 disappears, this cesium, strontium, plutonium, DU, and,

16 on the chemical part, we have the very contaminating,

17 the cyanide, the tetrachloride, evaporite, hydrazine,

18 and helimantodiad (ph). The combination of these two

19 help to --

20 THE REPORTER: I'm sorry. I'm sorry.

21 MR. QUIROGA: -- produce a contamination value of

22 the most higher of contamination, that it's going to the

23 liver about 11 or 55 years, and it's going to produce

24 cancer. And, basically the reasons that brought cancer

25 that is produced is a cancer that's basically a cancer

1008-1 **1008-1** DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. Section 2.8, discusses the UCLA study referred to by the commenter and notes some of the limitations the study authors identified. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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1 of the liver and of the bone, travel then, could be
2 cancer in the blood, is going to be contaminating
3 children. We can have cancers in other parts of the
4 body.
5 And, then basically, this is a study that's
6 been done at UCLA, where I was a member there of the
7 department, the disease are many, so there we started
8 the main prevention. Then from the people who were
9 working for -- in this place or people who live in the
10 neighborhood have a high proportion of cancer compared
11 with the general population, and then there is -- for
12 simple here, in the nation, that we have a -- a scale of
13 being highly contaminated in -- in the population to
14 produce cancer. We have a new study that -- that show
15 that the cancer is higher than on this -- in adult
16 population of people --
17 THE REPORTER: I'm sorry. I -- I --
18 MR. QUIROGA: -- who worked there --
19 MS. LOWE: We have --
20 MR. QUIROGA: -- and then now in children. But,
21 basically, all of the seas that aren't clean for human
22 beings, and they're being to go the disease, because we
23 contaminated the agent. And, the reason that there are
24 agencies that are responsible for that, and this is the
25 Department of Energy, and they're the primary agency

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1008-2 1008-2

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (remediation to background levels),

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1 either responsible for these (Inaudible) who are getting
 2 -- for cancer in the population that's close to work
 3 there, and then they have the responsibility to clean
 4 this, and their responsibility has to be to clean at
 5 background there, and there has to be responsibility
 6 cleaning there. And the reason, the most important
 7 thing, and there is no way that you can have a lazy feel
 8 for not to do that --
 9 (Clock timer ringing)
 10 MR. QUIROGA: -- is the responsibility of the state
 11 and has to do that.
 12 Thank you.
 13 MS. LOWE: Thank you. Okay. Betsey Landis will be
 14 followed by Alex Uzemeck, will be followed by Richard
 15 Mathews.
 16 MS. LANDIS: My name is Betsey Landis. I'm here
 17 representing the California Native Plant Society, and
 18 I'm -- I would like to look forward, not backwards. I'm
 19 about healing here, so keep a healthy earth makes
 20 everyone else healthier around it.
 21 So, I have some comments that I would like to
 22 say about your DEIS. I think you have the right idea of
 23 taking it over here and there and trying to get an
 24 overall plan that will clean up the earth and allow it
 25 to heal, and it is healing now, and it's just kind of

1008-2
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1009-1

as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Also please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts in the vicinity of SSFL.

1009-1 DOE acknowledges your concern about remediating SSFL in a manner that would minimize damage to the surrounding area. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

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1 slow, and not cause so much damage to the surrounding
2 area.

3 For instance, Woolsey Canyon Road is not
4 anywhere near able to handle all of those heavy trucks,
5 and if they go off the road, where do they land? They
6 land in a natural canyon, so you will have another
7 source of contamination that you'll have to clean up.

8 So, I would prefer that you do -- do
9 point-to-point on some of the radioactives, areas
10 that are -- need to be cleaned up and do deep cleaning.

11 I would prefer that you go with natural attenuation
12 where possible, because it seems to be -- because you
13 are monitoring things, it seems to be proceeding the way
14 it should. And, if you're monitoring low vegetation, I
15 would prefer that you remove all the non-native
16 vegetation. They're invasive plants that are pushing
17 out the deep-rooted plants that are actually cleaning
18 the earth. You need all those plants. They are working
19 hard on cleaning the earth for you.

20 And, you must preserve the rare plants you
21 have. You don't have that many rare plants, but you do
22 have some of the Santa Susana tarplant, and you also
23 have the Astragalus brauntonii, which I have studied for
24 years. You have the lovely population and the
25 Asteraceae, the Southern Buffer. You also have a couple

1009-1
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1009-4

1009-5

- 1009-2 DOE acknowledges that the potential for an accident increases as the volume of traffic increases. The truck shipments evaluated in the EIS are estimates based on the evaluated truck-loading configurations and the expected levels of cleanup. DOE agrees that there are some risks associated with the transport of the contaminated soils. However, the risks, as documented in Appendix H, Section H.8, and Chapter 4, Section 4.8.1, of this EIS, are very small. It should be noted that the radioactive contamination level in the soil to be transported is itself very low. Some soil to be shipped would likely have radioactive contamination levels below detection limits. Nevertheless, at least some contamination would exist in the transported soil. It should also be noted that the radioactive contaminants are bonded within the soil matrix and, in the event of an accident, soil would not easily become airborne and be carried over a long distance. If an accident were to occur, the expected releases would be local and manageable. Also see the response to comment 162-6. Appendix H, Section H.13, of this EIS evaluates the conditions and suitability of the roads that are considered for transporting various materials from and to the site. These evaluations are summarized in Chapter 4, Section 4.8.2. These roads are built to the standard for heavy-duty trucks and are adequate for the vehicles that would be used during the cleanup activities, although some repairs to some roads may be required over the duration of site remediation operations. The operations at the site, including management oversight, the expected traffic volumes, and the consequential traffic speeds, would result in traffic flow conditions with minimum potential for accidents. Section H.13 also provides details on the potential impacts of increased traffic on the roads in the vicinity of SSFL (including potential pavement damage) as well as on the roads near the evaluated disposal and recycle facilities.
- 1009-3 Thank you for your comment. It has been included in the Administrative Record for the EIS.
- 1009-4 In Chapter 6, Table 6-1, measure 5-9 identifies a Weed/Invasive Plant Species Management Plan will be implemented to eradicate noxious and invasive species as they appear on sites using State and/or federally approved methodologies. The Weed Management Plan will include strategies and measures to minimize the potential for invasive plant species (i.e., weeds) or soil pathogens to become established in disturbed areas and spread into restoration areas or natural areas. Weeds generally include those species listed by the California Invasive Plant Council and any species that can invade natural or restoration areas and replace or preclude the establishment of native or other more desirable species). All off-road earthmoving equipment such as excavators

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1 of plants that for some reason or other, either the
 2 entire land or somebody's close, besides you grow in the
 3 middle of all the buildings, and I am recommending here
 4 for the record that all you do is, if a stroll-back
 5 will produce seeds, take the seeds and take them up to
 6 the main population that's on the hill.

7 The other thing is that I was asked to tell
 8 you that -- that California has now decided that green
 9 waste is not disposable, and they're getting regulations
 10 on how you can handle it, and their choices are chopping
 11 and grinding or mulching or composting, and I would
 12 suggest --

13 (Clock timer ringing)

14 MS. LANDIS: -- that you chip and grind everything
 15 that you -- in the way of green waste or wood waste that
 16 you take off the site.

17 MS. LOWE: Thank you, Ms. Landis.

18 MS. LANDIS: Uh-huh.

19 MS. LOWE: Alec Uzemeck will be followed by Richard
 20 Mathews and then Arline Mathews.

21 MR. UZEMECK: My name is Alec Uzemeck. I am the co
 22 chair of the SSFL Community Advisory Group, the CAG, and
 23 I'm also a member of West Hills Neighborhood Council.
 24 I'm here representing myself this evening.

25 I support a cleanup of the SSFL. More

1009-5
cont'd

1009-5 Thank you for your comment. It has been included in the Administrative Record for the EIS.

1009-6

1009-6 DOE is aware of the Mandatory Commercial Organics Recycling (MORE) law that was signed into law by Governor Brown on September 28, 2014 (Assembly Bill Number 1826). A summary of this law was added to Chapter 8, Laws, Regulations, and Other Requirements, of this Final EIS. A statement was added to Chapter 4, Section 4.10, Waste Management, of this Final EIS that all wastes generated under the activities evaluated in this EIS would be managed in accordance with State and Federal requirements that are applicable to each type of waste.

1010-1

1010-1 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

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1 specifically, I support the Conservation of the Natural
2 Resources, and I believe that the AOC has to be changed
3 as is -- is in its present form. The AOC is a contract
4 between two parties, and if the two parties agree, the
5 contract can be changed at any time for any reason.
6 This particular cleanup that we're talking
7 about satisfies the National Contingency Plan, it
8 satisfies the California Health Act, NEPA, and USEPA
9 guidelines, and I'm sure that it would satisfy CEQA.
10 AOC does none of that. If you read the AOC,
11 it speaks to 132 chemicals. It doesn't discuss human
12 health, toxicity, or any other threats to human health.
13 It is just a list of chemicals that somebody has put
14 together and not rated by toxicity, but to have these
15 extraordinary cleanup levels, the AOC needs to be
16 changed.
17 Another thing, I believe that DOE says that
18 they're going to clean up the toxic materials at the
19 site, so they have this issue of remaining materials,
20 which I assume are not toxic, so these percentages
21 they're describing, chemicals that are not toxic or
22 harmful because the toxic ones have disappeared. So, as
23 you walk through the percentage, 99 percent says you're
24 doing a great job of separating those things that are
25 toxic from the ones that are not toxic, reducing

|| 1010-1
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|| 1010-2

|| 1010-1
cont'd

|| 1010-2
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|| 1010-1
cont'd

1010-2 DOE agrees with the commenter that the 2010 AOC can be changed. Section 8.0 of the AOC states that the "Order may be modified by mutual agreement of the parties." Note that the AOC itself does not address a specific number of chemicals. DTSC published LUTs identifying cleanup levels as provided for in the Agreement in Principal that is part of the AOC.

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1 excavation, reducing truck -- trucks that will go
 2 through their neighborhood, along with the pollution.
 3 So, please revise the AOC.
 4 Thank you.
 5 MS. LOWE: Thank you, Mr. Uzemeck. Next is Richard
 6 Mathews, who will be followed by Arline Mathews, who
 7 will be followed by Bill Mathews.
 8 MR. MATHEWS: I'm Richard Mathews. My background
 9 includes being a physics major at CalTech, where I
 10 handled radioactive materials, including some of the
 11 same radionuclides found at the site, and I think that
 12 gives me a fairly good understanding of what is safe and
 13 what is not.
 14 I am here on the behalf of the California
 15 Democratic Party, the Los Angeles County Democratic
 16 Party, and the North Valley Democratic Club, which have
 17 all passed resolutions calling for cleanup to background
 18 and following the AOCs. We also want to remind you, the
 19 Los Angeles City Council, the Simi Valley City Council,
 20 and the Tarrant County Supervisors have all voted, I
 21 think all unanimously, for cleanup to background. And,
 22 I point out that this includes organizations that are
 23 both delegated by Democrats and by Republicans. This is
 24 a bipartisan issue.
 25 I ask and we ask that you follow the contract

1010-1
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1010-2
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1011-1

1011-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD.

The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Also refer to Section 2.4, "Application of Exemptions under the 2010 Administrative Order on Consent," of this CRD. This section discusses that under all of the alternatives considered by DOE, locations with concentrations of chemical or radioactive constituents that pose a threat to human health would be cleaned up; this includes locations within exemption areas.

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1 that was entered by the AOCs. Do not be modifying the
2 contract. In order to modify the contract, it's
3 required to give consideration. And what consideration
4 would be given to the people of California, the people
5 of this area to protect us in order to change this
6 contract? Please follow the letter and spirit of the
7 AOCs, and that includes providing for groundwater
8 treatment to reduce the TCEs and PCEs.

9 We do recognize the critical habitat must be
10 protected, and that is in accordance with the AOCs, but
11 that isn't where the majority of the pollution is. In
12 the areas that are more heavily polluted, it is
13 necessary to go and do a good thorough cleanup to
14 background levels.

15 Restore the site to its natural site. Make
16 the people of California, the people of these valleys
17 whole by giving us open space that we can be proud of.

18 Thank you very much.

19 MS. LOWE: Thank you, Mr. Mathews. The next
20 speaker will be Arline Mathews. Arline will be followed
21 by Bill Mathews, and then Cindy Gortner.

22 MS. MATHEWS: Ladies and gentlemen, respectfully --

23 MS. LOWE: Ms. Mathews started your introduction --
24 introduce your --

25 MS. MATHEWS: I'm sorry. You can't hear me?

1011-1
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Response side of this page intentionally left blank.

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1 MS. LOWE: Well, no. I need you to introduce
 2 yourself. I'm sorry.
 3 MS. MATHEWS: Arline Mathews.
 4 MS. LOWE: Thank you.
 5 MS. MATHEWS: I'm a solar advocate, political
 6 activist for many years.
 7 MS. LOWE: Thank you.
 8 MS. MATHEWS: Respectfully, I want to say that we
 9 have every right to be made whole again, to have a
 10 cleanup to background. If there was an automobile
 11 accident, a judge would say, "But the victim has a right
 12 to be made whole." And we have been victim of a federal
 13 government that says they were going to defend us. It's
 14 not defense when -- when our people have been made to
 15 suffer and die. My son Bobby died of glioblastoma,
 16 which killed all of the firemen at the Santa Susana
 17 Field Lab, the same rare ailment nobody like everly --
 18 ever had cancer before, never, but Bobby died of
 19 glioblastoma.
 20 So, you propose -- the federal government
 21 proposes to ignore the Consent decree that they signed.
 22 That should have been the end of it. And to reduce the
 23 amount of damaged soil by nine times, so in round
 24 numbers, reduce it from 900,000 to a hundred thousand
 25 cubic yards, to reduce it from 70,000 truck loads to

1012-1

1012-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

1012-2

1012-2 DOE acknowledges your concern and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL, as well as a discussion of the studies of University of Michigan (Morgenstern) study and the UCLA (Cohen) study. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

1012-1 cont'd

Whereas the incidences from the past described in the comment may or may not be accurate, they are not relevant to the current effort. DOE's current focus is to complete the cleanup of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible.

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1 only 14,000 truck loads. You have a duty to obey a
2 court order that you signed, and we have a right to be
3 made whole.

4 And I have a few more things to add. Let me
5 talk about the Environmental Impact Report, and that's
6 terribly important. You don't include the lives that
7 have died that are gone forever and those that continue
8 to die and suffer and the valleys that suffer with the
9 deaths of relatives.

10 Dr. Morgenstern at the University of Illinois
11 did a preliminary study and said that if it was left
12 intact, that what would happen is the people would
13 continue to suffer or die in our community. No study
14 has been made about the increased amount. But Dr. Cohen
15 at UCLA agreed with Dr. Morgenstern of the University of
16 Illinois, and said that leaving it in place all these
17 years continues to hurt our people. So, I have to end,
18 I'm sorry to say.

19 (Clock timer ringing)

20 MS. MATHEWS: But, let me just say this: You
21 signed a Consent decree, it has to be made done, and we
22 have to be made whole.

23 (Clock timer ringing)

24 MS. MATHEWS: That means clean up to background,
25 nothing less than background.

1012-2
cont'd

1012-1
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 MS. LOWE: Thank you, Ms. Mathews. Bill Mathews
 2 will be followed by Cindy Gortner, will be followed by
 3 Mark Osokow.
 4 MR. MATHEWS: Well, I don't have any prepared
 5 remarks, but -- so this will be real short.
 6 MS. LOWE: Start with your name.
 7 MR. MATHEWS: I'm Bill Mathews.
 8 MS. LOWE: Thank you.
 9 MR. MATHEWS: I -- Arline is my mother. Robert
 10 Mathews was my brother. We lost him 20 years ago, I'm
 11 sure again through your -- the situation.
 12 I haven't been in touch with this because I
 13 live in Albuquerque, New Mexico. Over there, you
 14 probably know we have Kirtland Air Force Base, we have
 15 Sandia National Labs, and upstream, up the Rio Grande,
 16 we have Llano, Los Alamos National Labs. New Mexico's a
 17 very contaminated place. We also have high instances of
 18 cancer, dating all the way back to the first explosion
 19 of the atomic bomb in 1945. And I'm very quieted,
 20 mostly expecting families that have been ignored in the
 21 decades since are still clamoring this injustice. And,
 22 I, as an Albuquerque resident -- resident, realize that
 23 we have a plume of underground jet fuel from Kirtland
 24 Air Force Base coming towards my house, which is only
 25 five miles from the airport. And, we live -- we live in

1013-1

1013-1 Thank you for your comment. It has been included in the Administrative Record for this EIS.

1013-2

1013-2 Kirtland Air Force Base is operated by the U.S. Air Force. DOE is not responsible for U.S. Department of Defense activities at Kirtland Air Force Base. DOE has prepared sitewide EISs (SWEISs) for Los Alamos National Laboratory (DOE 2008) and Sandia National Laboratories (DOE 1999). These SWEISs evaluate the impacts of continued operation of these facilities. DOE also prepares Annual Site Environmental Reports (ASERs) for these facilities (DOE 2017b, 2017c). The ASERs describe the results of ongoing environmental monitoring in and around the facilities. Generally, the offsite impacts of normal operations are minimal and within regulatory requirements.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 there.
2 And, so, I'm just saying, you know, we always
3 have to be aware of bureaucratic politicians' prior
4 decisions. Always consider the human perspective.
5 Thank you.
6 MS. LOWE: Thank you very much. Cindy Gortner will
7 be followed by Mark Osokow and then Christina Walsh.
8 MS. GORTNER: Hi. I'm Cindy Gortner. I find it
9 morally repugnant that the DOE is not following the
10 AOCs.
11 If I didn't want to pay for a cleanup, I would
12 do what I'm seeing tonight: I would hand out pictures
13 that have flowers on them and animals. I wouldn't talk
14 about the children and the cancer. I would put up
15 alternatives that talk about trucks and water use and
16 time, and I wouldn't talk about people getting sick.
17 But I don't think you want to spend the money, and that
18 makes me sad and I'm frustrated.
19 The DOE does not need to look at alternative
20 cleanup levels. That is false. And the AOC, which you
21 signed, said you need to look at alternative methods to
22 clean up, not alternative cleanup levels. As Arline
23 said so beautifully, we've waited -- somebody said we
24 waited 58 years. It was Maggie. We waited 58 years to
25 have it cleaned up. I can wait 10 years for the trucks

|| 1013-2
cont'd

|| 1014-1

|| 1014-2

- 1014-1 As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. Because the AOC cleanup is not the normal way DOE, EPA, or California DTSC performs soil cleanups, DOE evaluated the costs and benefits of the AOC cleanup versus what is normally done (that is, a cleanup that is based on risk and future land use). That analysis demonstrated that the AOC cleanup would be much more expensive and with minimal additional protection of public health and the environment. Also, please refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information on this topic. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 1014-2 NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD), as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels. The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 to go by. That's okay. I don't need it to be just two
 2 years. We've waited a long time.

3 I want to talk about the rain. There have
 4 been 216 exceedances, which means 216 times that we know
 5 of water coming off the hill has come down into our
 6 communities that will potentially make people sick.
 7 There's no justification for this, not flowers, not
 8 caves that aren't near or are going to be cleaned up.
 9 There's no justification for not doing the right thing.

10 And, as John mentioned, we have one of the
 11 largest EPA studies of all time, 41 and a half million
 12 dollars, and they found 500 places that were still
 13 radioactive. So it doesn't make any sense to me why
 14 we're talking about how many trucks or alternative
 15 methods when we have an AOC that is signed, we have
 16 people that we know are getting sick, and we have water
 17 running off the hills that's still contaminated. Those
 18 are fact. So it's not okay to show the option one that
 19 leaves 39 percent of the contamination, option two that
 20 leaves 91 percent, option three that leaves 99, and
 21 option four that leaves a 100.

22 And, by the way, the statement made earlier
 23 that the DOE is cleaning up toxic chemicals and leaving
 24 non-toxic chemicals is false.

25 Thank you. Please clean up to the AOC. I

1014-2
cont'd

1014-3

1014-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

1014-2
cont'd

1014-4

1014-4 Under the Cleanup to Revised LUT Values Alternative and Conservation of Natural Resources Alternative, DOE would remove chemicals above levels that are harmful to human health and the environment for the designated future open space land use. Concentrations of chemicals below these levels would be left in place.

1014-2
cont'd

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 appreciate your time.
2 MS. LOWE: Thank you, Ms. Gortner. Okay. Mark
3 Osokow will be followed by Christina Walsh and then
4 Bonnie Klea.
5 MR. OSOKOW: My name is Mark Osokow, and I'm
6 representing the San Fernando Valley Audubon Society. I
7 spoke on Saturday and missed a few things and a few
8 points came up later that I would like to address. And
9 one of the things that I should mention, first of all,
10 is that San Fernando Audubon Society will be supporting
11 the Conservation of Natural Resources alternative for
12 the cleanup.
13 You've heard a lot of talk here about the
14 cluster of cancer. I'm really shocked really to hear
15 this, this kind of talk coming from so many people who
16 believe this, that there's very little evidence to show
17 that anything from Santa Susana has caused cancer, and I
18 have a number of different items to demonstrate from the
19 natural perspective that there's no cancer being caused
20 now on the site. I'm not going to discuss what happened
21 in 1959. But, before I get into that, I'll see what --
22 how much -- you set the maybe the three minutes of time
23 that I have.
24 First of all, I'm going to address the legal
25 issue -- some of the legal issues. The legal reasons

|| 1014-2
cont'd

|| 1015-1

1015-1 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

|| 1015-2

1015-2 DOE acknowledges your comment and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

|| 1015-3

1015-3 DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to "advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety" (42 U.S.C. 7112(13)).

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 that are asserted in support of the AOC are spurious.
 2 I've heard a lot of talk in the whole room as for
 3 proponents of the AOC claiming that the DOE is bound by
 4 it and it was signed voluntarily. And, first, the way
 5 the case, it is questionable as to whether it even --
 6 whether DOE even has the legal right to enter into the
 7 AOC. DOE is a department of the executive branch of
 8 government. It does not pass legislation. DOE's
 9 signing the AOC has so far avoided legal
 10 scrutiny; however, it is likely in violation of the
 11 Supremacy Clause of the United States Constitution,
 12 Article 6, Clause 2. It is likely that the DOE is
 13 barred from unilaterally to signing -- deciding to wave
 14 the rights of the United States. There must be a
 15 specific act of Congress authorizing such an action.

16 The second assertion that DOE was likely
 17 signing voluntarily is clearly preposterous. At the
 18 time, the AOC SB 990 was still state law. The DOE was,
 19 therefore, under the duress of signing the AOC or else
 20 face penalties. SB 990 has since been found to be
 21 unconstitutional in "Boeing versus Raphael." It is
 22 unlikely that the DOE would have signed the AOC were it
 23 not for the duress this SB 990 and actors then and by
 24 various elected officials. I'm not going to attempt to
 25 go further with the impacts that would have been

1015-3
cont'd

DTSC did not enforce SB 990 with respect to DOE, so DOE was under no duress attributable to SB 990 when the 2010 AOC was negotiated. The 2010 AOC states that DTSC agreed that compliance with the 2010 AOC would constitute DOE compliance with applicable provisions of the California Health and Safety Code (Section 1.6), including Senate Bill 990. However, after the law was declared unconstitutional, SB 990 was no longer enforceable.

1015-4 1015-4 Please see the response to comment 1015-3.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 interference from various congressional, state and local
2 elected officials, some of whom control the purse --
3 purse strings of DOE and other agencies involved.
4 Voluntarily signed. Get real. Okay.
5 There are several lines of evidence from the
6 natural history of the site, which looks like I'm not
7 going to have time to address. However, I've been
8 studying bird logs at Santa Susana Field Laboratory for
9 going on seven years now, and I'm doing a cancer study
10 of the bird life, and I have found no examples, that is
11 zero, no examples of any --
12 (Clock timer ringing)
13 MR. OSOKOW: -- birds that have been infected by
14 contaminants, and birds are far more sensitive in
15 environmental indicators than humans are.
16 (Clock timer ringing)
17 MR. OSOKOW: Cancers don't take many years to
18 develop in many cases. Birds have their own types of
19 cancers and they're not going to die.
20 MS. LOWE: Thank you, Mr. Osokow. I think this is
21 an opportunity to remind everybody that you can submit
22 as many comments as you want in writing. So, we have
23 three minutes tonight. Christina Walsh will be followed
24 by Bonnie Klea and then Devyn Gortner.
25 MS. WALSH: Good evening. My name is Christina

1015-4
cont'd

1015-5 1015-5 Thank you for your comment. It has been included in the Administrative Record for the EIS and agrees with the preparers' observations of a healthy ecosystem outside the industrially developed portions of the site.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Walsh. I represent cleanuprocketdyne.org, which I
 2 founded in 2001, as well as the National Monument
 3 Project that I had hoped that there could be a future
 4 for this site.

5 The first thing I'd like to introduce that I
 6 am -- I'm deeply disturbed about -- first of all, the
 7 prior speaker has had seven years of full access to the
 8 site on his own, and so he's clearly motivated to keep
 9 it that way.

10 This is a chart -- excuse me -- a chart that
 11 has been distributed to the public by the CAG. It is
 12 false. It describes all three alternatives as AOC
 13 alternatives. It also says that they take 12 years,
 14 five years, and four years, so this -- this has been
 15 redone, and then it's been altered and distributed so
 16 that people in West Hills will vote thinking all of them
 17 are compliant. So, that's a serious misdirection from
 18 the group that is funded by DOE that says that they were
 19 told to keep it a secret, that was the condition of
 20 funding.

21 Now I'm going to talk about these maps that
 22 you've provided. According to the -- this first one,
 23 this is your paint areas. It shows that the AOC version
 24 requires that you remove all of the roads across the
 25 entire site, so miles and miles of roads, so that

1016-1

1016-1 DOE does not control information distributed by those it has funded, including not only the CAG, but also the SSFL Advisory Board, SSFL Work Group, Committee to Bridge the Gap, Physicians for Social Responsibility, Rocketdyne Cleanup Coalition, and Teens against Toxins. DOE does not direct grantees on publicizing the receipt or source of grants. It was at the discretion of the CAG whether to publicize the grant. DOE posted notification of the grant in September 2015 on USASpending.gov, an official website disclosing grants, loans and other financial assistance awards. Information on the SSFL CAG grant can be found here: <http://go.usa.gov/xWpte>.

1016-2

1016-2 Within Area IV, about 10,000 feet (less than 2 miles) of paved road remains. As stated in the Draft EIS, DOE does not plan to remove any road as roads will be needed to access well and stormwater sampling stations. An exception may be made for roads where soil contamination has been shown to extend below a road.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 increases the number of trucks to that 70,000. It
2 certainly helps along the way.

3 Then I'd like to look at these shaded areas.
4 I've been told that the shaded areas that are supposed
5 to be deducted from the number of trucks are not
6 deducted from the number of trucks. So, it's falsely
7 inflated to make that big, bad AOC cleanup look too
8 impossible to do.

9 Now I look at the shaded green areas, and I'm
10 very disappointed to see that there are no -- there's
11 really -- there's no contrast on these, so it's very
12 hard to see where they reach. But I -- I do see,
13 because I know the site very well, that these shaded
14 areas include -- excluding the old conservation yard,
15 which had more than 10,000 barrels and containers of
16 contaminated waste strung across it, it showed that part
17 of the SRE, where they had the nuclear partial meltdown,
18 is also now a -- a shaded green area. The Building 56
19 Landfill and Building 56 Excavation have been shaded
20 green as if they are something special, as well as the
21 Area IV Burn Pit partial area, and S -- STR4, and even
22 the Hot Lab Back Yard is being shaded as -- as if it
23 shouldn't have to go. The little white areas, the few
24 that you see, are actually buildings. So, this is
25 showing us that they're not even going to remove.

1016-2
cont'd

1016-3 1016-3 The Old Conservation Yard has been subject to prior soil cleanup actions, all drums and materials have been removed, and EPA's data show no radiological impact today. The green areas identify locations where exemptions to cleanup may be applied to protect biological and cultural resources. The green areas are not exempt to cleanup actions, focused cleanup actions would be performed in areas where contamination exceeds human health and ecological risk-based limits.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 I just -- I'm -- I'm extremely disappointed.
 2 I wanted -- I want to protect these areas. I think that
 3 they're critical, one of our corridor native species --
 4 (Clock timer ringing)
 5 MS. WALSH: -- and as sacred Native American sites.
 6 But you are all taking advantage of that --
 7 MS. LOWE: Thank you, Ms. Walsh.
 8 (Clock timer ringing)
 9 MS. WALSH: -- and using that to falsely --
 10 (Clock timer ringing)
 11 MS. LOWE: Thank you very much. Bonnie Klea will
 12 be followed by Devyn Gortner, will be followed by Ronald
 13 Smith.
 14 MS. KLEA: Hello. My name is Bonnie Klea. I
 15 worked in the early years at the Santa Susana, and in
 16 1994 I was diagnosed with brain cancer. All my doctors
 17 said they were treating many, many employees from the
 18 site, and my -- my cancer was a work-related cancer.
 19 By -- by the end of the 1990s they're -- the
 20 Department of Energy's -- and the head of the Department
 21 of Energy was Hazel O'Leary saw that all the cancer
 22 studies done of all the nuclear sites in America showed
 23 a high rate of cancer among the workers, and she got
 24 together with President Clinton then and they passed a
 25 nuclear compensation program for 350 companies in

1016-4

1016-4 DOE is applying the exemptions allowed in a very reasoned manner. Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of this topic and DOE's response. Regardless of exemption area boundaries, soils with concentrations of chemical and/or radioactive constituents that pose a threat to human health or the environment would be cleaned up. The relationship of Area IV and the NBZ to wildlife corridors in the region is an important topic that has been updated with additional information in this Final EIS.

1017-1

1017-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children in Los Angeles and Ventura Counties (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. Section 3.9.5 also summarizes the published health studies for workers at SSFL, as well as cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 America for all the workers who got one of 22 cancers
2 and worked there at least 250 days.

3 And I was shocked to see that Atomics
4 International, Santa Susana, Canoga, Desoto and the
5 Downey facility were all listed and covered. But guess
6 what? We couldn't get paid. Boeing got involved. They
7 were on our phone calls with the Department, they came
8 to our meetings, and none of us -- there were two people
9 who got paid when I got involved, and I filed a special
10 exposure covert, and I had to prove that they didn't
11 have the records to figure out how much dose we had
12 received, and I won. Just last December, they gave us
13 24 more years. So, all workers can get paid without any
14 burden of proof by them from 1948 through 1988.

15 I have counseled many wives whose husbands
16 were dying. I counseled many husbands who knew they
17 were dying, that I'd help their wives get the
18 compensation. Children had both parents who worked
19 there and died of cancer, I helped them get their claims
20 paid.

21 I lived at -- in 1959, in each homes, all of
22 the -- the houses they removed -- or built in 1959, and
23 after I was diagnosed, I did a survey of all our
24 neighborhoods with a note pad, and I found out that
25 every single house on my street had one or two deaths,

1017-1
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 every single house, and it was the same way in every
 2 single neighborhood where I live.

3 I know that a study was done of all the
 4 radionuclides. 45.1 million dollars was spent.
 5 Everybody knows exactly where those radionuclides are.
 6 You know where they are. We know where they are. And I
 7 support the AOC to -- to clean it all up. There
 8 shouldn't be any radionuclides left up there. And, if
 9 anything needs to be changed, I would recommend that you
 10 extend the period of time. Instead of trying to figure
 11 out how to have so many trucks per year, just give it a
 12 few more years.

13 And, it's so sad to see all these new families
 14 now with children, 35 -- 35 families with little kids
 15 with leukemia, and it makes me very sad. I was hoping
 16 the danger of cancer would have passed, but obviously
 17 not, and I've seen the -- the retinoblastoma families
 18 and now we have new --

19 (Clock timer ringing)

20 MS. KLEA: -- families with little children with
 21 cancer, and it's very, very sad. Please clean up --
 22 this up.

23 MS. LOWE: Thank you, Bonnie Klea. Devyn Gortner,
 24 and then Michael Smith, and then we will take a five
 25 minute break for the front of the room to have a chance

1017-1
cont'd

1017-2

1017-3

1017-4

1017-1
cont'd

1017-3
cont'd

1017-2 DOE thanks you for your comment. The extensive soil sampling performed by EPA and DOE and the review of those data by EPA and DTSC show that the radioactive contamination is restricted to about 12 locations.

1017-3 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

1017-4 As discussed in Chapter 2, Section 2.4.4, of this EIS, DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of truck round trips on Woolsey Canyon Road to no more than 96. (After consideration of budget and operational constraints, DOE has incorporated a more realistic estimate of 16 truck round trips per day on Woolsey Canyon Road for DOE soil removal activities. The impacts of this reduction in truck traffic have been incorporated into the analysis of all three of the soil remediation action alternatives.) Extending the period of time for remediation activities would reduce the daily and annual risks and other environmental impacts such as water use; however, it would not reduce the overall risks or impacts determined for an alternative but would only spread them over a longer period of time. DOE will consider your recommendation when developing the Record of Decisions for this Final EIS.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 to go to the restroom. Devyn.
2 MS. GORTNER: My name is Devyn Gortner. I grew up
3 less than five miles from the site. I'm the founder of
4 Teens Against Toxins, and I'm here today -- that
5 happened for almost a decade -- to speak on behalf of
6 the undercommittee near SSFL. I wish I could play on
7 the peak, but radiation rise up to you, but, I said, I
8 grew up to Madonna, and the environmental nuclear
9 horror.
10 Research here to debunk the claim that DOE's
11 been making that these alternatives are -- alternatives
12 are protective of human health. The DOE claims their
13 risk-based cleanup option will allow 25 millirems a year
14 exposure. This is the equivalent of a chest X-ray per
15 month for a year for decades.
16 But the actual number is far higher. Please
17 bear with me. I promise what I've got to share is
18 simple math. To calculate this estimated risk to human
19 health, DOE claims to have used the suburban residential
20 scenario, but actually left out the suburban component
21 of that scenario, which is required to be included. In
22 fact, the DOE's risk estimate low-balled this by a
23 factor of at least a hundred thousand.
24 By comparison, if you run the EPA's dose
25 compliance calculator for the same scenario used but

1018-1

1018-1 The EPA dose calculator default residential exposure pathways include a garden pathway which assumes 25 percent of the fruits and vegetables consumed by the resident are raised in a home garden. The EPA dose calculator results in the same risk slope factors as were used in the Draft EIS when the garden pathway is not included.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLS based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Residential Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

When a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989) does allow for some averaging and prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and only suggests the use of a maximum value as a screening tool. It is important to note that under any of the soil remediation alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment, would be removed. Soils that would be left on site would have lower concentrations of chemical and/or radioactive constituents. Each of the three action alternatives analyzed in this EIS would leave SSFL Area IV and the NBZ safe for their designated future land.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 include the background suburban component as required
 2 and look at the amount of strontium-90, that would yield
 3 a dose of 25 millirem, which is what the DOE's
 4 proposing, you'd be looking at 19.4 picocuries per gram.
 5 The DOE is proposing a standard of 1200
 6 picocuries per gram of strontium-90. That is 62 X-rays
 7 a month or 744 a year for a decade. Children like Grace
 8 and Ryan, pregnant women, and families would be exposed
 9 to those levels.
 10 And now the DOE's proposed standard is based
 11 on a dose and concentrations that are averaged over a
 12 wide area, meaning the contaminated places are diluted
 13 by averaging lower readings half a mile away, so the
 14 actual exposure could be more than 744 X-rays a year,
 15 even in the thousands. I've been reading the history of
 16 Round-Robin in order to be aware of chest X-rays, and
 17 even our doctors recommend no more than one a year. The
 18 following forset (ph) values is totally inconceivable
 19 and infuriating.
 20 I said it on Saturday. I'll say it again.
 21 You promised me you would protect me, my family and my
 22 community. You promised six years ago that you would
 23 clean up the mess you made so if there's any left, you
 24 never made it in the first place (sic). The cleaning up
 25 debunked every single one of your excuses as to why you

1018-1
cont'd

1018-2 1018-2

DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 cannot keep this promise.
2 Maybe we will never have definitive proof that
3 the exact contamination you left created a cancer that
4 braced Grace and Ryan dozens of other children, but even
5 the slightest chance it could be linked should be more
6 than enough to act and act now. Better safe than sorry.
7 It rained today, washing more and more of the
8 contamination down into the neighborhood below the site.
9 Tomorrow it's going to be sunny, and the kids are going
10 to go back playing in their yards. Your move.
11 MS. LOWE: Michael Smith.
12 MR. SMITH: Hi. I'm Michael Smith. I'm an
13 attorney and legal advocate. I was born and raised in
14 the area, yet I'm just learning about all this with
15 Santa Susana Laboratory. I think this is sad. I think
16 how does something so significant and tragic become
17 undermind.
18 Moving on to jurisdictional issues, I think
19 provided by NEPA versus the AOC, that's the
20 questionable -- a questionable thing. Also the DTSC
21 should be imposing more strict standards, particularly
22 because this affects public health and safety. There's
23 also legal issues and logistics I want to discuss.
24 First of all, the AOC, as a lot of people have
25 pointed out, is a legally binding agreement which

|| 1018-2
cont'd

|| 1018-3

1018-3 DOE acknowledges your concern. Please refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for additional information on these subjects. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

|| 1019-1

1019-1 Thank you for your comment. Because the comment is not on the scope or content of this EIS, no response is provided. It has been included in the Administrative Record for the EIS.

Section 3 - Public Comments and DOE Responses

3-1627

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 imposes legal obligations and guidelines for cleanup.
 2 The AOC provides a -- the schedule for implementation of
 3 planned remedial actions shall ensure that identified
 4 activities be accomplished by 2017 or sooner. It's now
 5 nearly two months into 2017, and there's been no
 6 implementation of remedial actions. As put in
 7 compliance, the DTSC should be imposing a \$15,000 per
 8 day fine for noncompliance. However, there -- there's
 9 yet to be any fine imposed by -- and by a number of
 10 calculations, that's near \$900,000 worth of fines by
 11 March 2017. Where's the accountability on that?
 12 And there should be no issuance of legislation
 13 based on arbitrary and/or skewed statistics and
 14 timelines, which I think we all -- or most of us believe
 15 is the case. This very -- the charts and graphs, this
 16 small geographical radius considered, and this is also
 17 an issue of transparency, and I think we need to be a
 18 little bit more transparent here.
 19 The AOC does include -- also the note issues,
 20 is that AOC does not include a leave-in-place
 21 alternative or any alternatives, that the DEIS proposal
 22 should not even be considered pursuant to this order, as
 23 they consider leave-in-place options like natural
 24 attenuation.
 25 We're dealing -- we're dealing here with

1019-1
cont'd

1019-2

1019-2 The AOC allows for onsite treatment of soil, of which monitored natural attenuation is considered treatment. DOE applied this treatment to soil with "low concentrations" of petroleum-like chemicals. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 governmental agencies and public health. I want us to
2 be better safe than sorry, no matter -- just -- just
3 than take a risk.
4 Thank you.
5 MS. LOWE: Thank you. So, we will take a
6 five-minute break. We will reconvene at 8:05. To just
7 give you a sense of where we are, that 19 people have
8 testified so far. At this time, I've got 43 registered.
9 If you haven't signed up to speaking and you would like
10 to, please do so while we're on a break. The next three
11 people are Matt Chin, Catherine Lincoln and Dorri
12 Raskin.
13 (Recess Taken)
14 MS. LOWE: Okay. People, could you please be --
15 sit back down and quiet down. Okay. If you could
16 please sit down and stop talking. Matt Chin will be
17 followed by Catherine Lincoln and then Dorri Raskin.
18 Please quiet down for Mr. Chin to offer his comments.
19 MR. CHIN: My name is Matt Chin. I grew up in
20 Agoura Hills and I'm a current resident of Agoura Hills,
21 and I've been told Saturday -- I was completely unaware
22 everything else happening, and -- and I was scared. I
23 got to reading -- they scared -- the amount of time
24 that's gone by without any action at all. We're talking
25 about nuclear waste here, and they're not saying that

1019-2
cont'd

1020-1

1020-1 Chapter 1, Section 1.3, contains a history of the SSFL site that summarizes DOE's past activities in Area IV, including previous cleanup efforts. Additional information can be obtained from the DOE Energy Technology Engineering Center website (see <http://www.etec.energy.gov/>). DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in compliance with regulatory requirements, including regulations, orders, and agreements. Like other waste generated at Area IV, radioactive waste generated under the activities evaluated in this EIS will be managed (disposed in the case of radioactive waste) in accordance with applicable State and Federal regulations. Generation and management of radioactive and other wastes resulting from the activities evaluated in this Final EIS are addressed in Chapter 4, Section 4.10, of this EIS.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 we've been told -- a person to understand, nuclear waste
 2 is really a big deal. The thought that I grew up there,
 3 possibly having family and their lives really scared me.
 4 As a resident, I would like to see this thing
 5 cleaned up as soon as possible. All the timelines that
 6 I've been shown, so far, they contaminated, but there's
 7 nothing they're doing about. It's going to be there for
 8 a long time until you take action and remove it. And,
 9 as a resident, I just want to say, I want trucks. I
 10 don't care if it's 10 years, 20 years. It's going to be
 11 there for potentially 100,000 years or more unless
 12 someone cleans it up. If you have responsibility, then
 13 it's your responsibility to clean it up. Somebody has
 14 to do it. I think I should voice issues that AOC is the
 15 original contract.
 16 Thank you.
 17 MS. LOWE: Thank you. Catherine Lincoln will be
 18 followed by Dorri Raskin and then Jane Londi.
 19 MS. LINCOLN: Hi. My name is Catherine Lincoln,
 20 and I've been a resident of San Fernando Valley for
 21 almost 35 years. I am deeply upset that the DOE is
 22 breaking its legally binding commitment to clean all of
 23 the contamination at their SSFL site.
 24 Every one of the cleanup options violates the
 25 AOC cleanup agreement, leaving in place 39 to 100

1020-1 cont'd

1020-2

1020-3

1021-1

1020-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

1020-3 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. There has been a lot of cleanup performed in Area IV. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completing remediation at those portions of SSFL for which DOE is responsible, Area IV and the NBZ.

1021-1 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 percent of the contamination while the AOC bars
2 consideration of any leave-in-place alternatives.

3 But as my time is limited, I'd like to focus
4 on particularly the egregious violation: One of the
5 excuses the DOE is using to not clean up about 330,000
6 cubic yards of soil is what they claim to be a
7 biological exemption, but DOE is grossly representing
8 this exemption, which is strictly limited in the AOC and
9 for which it does not qualify. The AOC states that the
10 entire site must be cleaned up to local background
11 levels. It allowed a very narrow exception to be
12 considered only to the extent that the U.S. Fish and
13 Wildlife Service -- and I quote -- "issues a Biological
14 Opinion with a determination that implementation of the
15 cleanup action would violate Section 7(a)(2) or Section
16 9 of the Endangered Species Act, and no reasonable and
17 prudent measures or reasonable and prudent alternatives"
18 would "exist that would allow for the use of the
19 specified cleanup standard in that portion of the
20 site." That's the quote. There has, however, been no
21 such biological opinion from the U.S. Fish and Wildlife
22 Service. The exception does not apply.

23 Indeed, the U.S Fish and Wildlife Service did
24 issue a biological opinion several years -- several
25 years ago to EPA when they were pretending to work for

1021-1
cont'd

1021-2

on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

1021-2 Please refer to "Application of Exemptions under the 2010 Administrative Order on Consent" (Section 2.4 of this CRD) for a discussion of DOE's activities to implement exemptions in compliance with the 2010 AOC. Contrary to the commenter's assertion that this EIS says DOE is not going to clean up anything in any of the biological exemption areas, Chapter 2, Section 2.3.2 of this EIS, indicates that these areas would be cleaned up if chemical or radioactive constituents in the soil pose a risk to human health or the environment, as determined using risk-based screening levels (RBSLs). The text in this EIS was revised to more clearly make this point.

This Final EIS provides an updated assessment of cleanup activity and exemption areas, and also has incorporated the results of consultation with U.S. Fish and Wildlife Service.

The 2010 Biological Opinion issued for EPA's activities has very limited applicability to the present project as explained in Section 2.3 of this EIS. Soil remediation requires removal of vegetation and soils in the treated areas, a profound and difficult-to-mitigate impact, whereas the EPA action that was the subject of the 2010 Biological Opinion involved trimming or mowing vegetation, a much less severe impact, which leaves the potential for rapid recovery of the vegetation and habitat by re-sprouting or germination from the soil seed bank. The impacts of extensive removal of soils and vegetation under cleanup to AOC LUT values would be much more severe and recovery after this disturbance has many uncertainties and would be prolonged at best.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 the cleanup, which was to involve cutting down some
 2 vegetation part so a radiation survey could be done, and
 3 they concluded that mitigation measures could be done
 4 and that indeed the cleanup of the contamination was
 5 critical for protecting the biological resources.

6 So, the Draft EIS, however, says they're not
 7 going to clean up anything in any of their self-declared
 8 biological exemption areas. DOE has no right to declare
 9 these areas or to decide for themselves how to handle
 10 it. And, furthermore, the guidelines say that if
 11 biological resources are identified, mitigation measures
 12 are to be taken, not that the DOE should avoid cleanup
 13 altogether. DOE claims they want to protect the
 14 environment and species by not cleaning up the
 15 contamination. However, leaving contamination on the
 16 site would actually hurt the ecosystem.

17 I would ask that DOE fully comply with the
 18 AOC, clean up all of the contamination and stop trying
 19 to greenwash a plan which appears to be wanting to avoid
 20 the cost of the cleanup behind the ESA. Please, clean
 21 this site fully.

22 MS. LOWE: Thank you. Thank you, Ms. Lincoln.
 23 Dorri Raskin will be next, followed by Jane Londi,
 24 followed by --
 25 (Clock timer ringing)

1021-2
cont'd

1021-1
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 MS. LOWE: -- sorry -- followed by Catherine
2 Stettner.

3 MS. RASKIN: Hi. I'm Dorri Raskin. I'm ready to
4 comment on DOE's Draft DES for the SSFL Area IV cleanup.

5 As you know, SSFL was primarily used for
6 rocket engine tests that -- that went on for decades,
7 leaving a legacy of contamination of dangerous
8 radionuclides and toxic chemicals. These contaminants
9 migrate from the site and put nearby communities at risk
10 of cancer and other illnesses. Federal studies indicate
11 higher rates of certain cancers for both workers at the
12 site as well as off-site population. It is, therefore,
13 imperative that the site be fully cleaned up as DOE
14 committed to do in 2010 when it signed a -- a AOC to
15 clean up to background level the contamination.

16 Unfortunately, all the cleanup options
17 presented in the DOE DES violate the AOC cleanup
18 agreement, leaving between 34 to 94 percent of the site
19 not cleaned up. The AOC requires that all detectable
20 contamination be cleaned up and it expressly bars any
21 leave-it-in-place option.

22 DOE claims that its recent cleanup options are
23 sufficiently protective of public health, but they are
24 not. In deed, DOE's second and third options manipulate
25 long-standing EPA protective standards and guidelines.

1022-1

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1022-3

1022-4

- 1022-1 This Final EIS is being prepared to evaluate alternatives for completing the remediation of those portions of SSFL, Area IV and the NBZ, for which DOE is responsible. Chapter 1, Section 1.3, provides a history of the SSFL site that summarizes DOE's past activities in Area IV, including previous cleanup efforts. Additional information can be obtained from the DOE Energy Technology Engineering Center website (see <http://www.etc.energy.gov/>). Rocket engine testing was a completely separate activity from the nuclear research DOE and its predecessor agencies conducted in Area IV; and was conducted in locations other than and physically separated from Area IV, by entities other than DOE. DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. DOE will complete contamination removal and site remediation based on the decisions made pursuant to this Final EIS and in compliance with regulatory requirements, including regulations, orders, and agreements.
- 1022-2 DOE acknowledges your concern. Please refer to Section 2.7, "Offsite Impacts," of this CRD regarding what is known about offsite contamination and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for a discussion of the public health studies worker health studies related to SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.
- 1022-3 Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Furthermore, the National Academy of Scientists and all
 2 federal agencies state that there is no safe level of
 3 radiation exposure.

4 DOE failed to consider routes for the
 5 transportation of contaminated soil that avoids
 6 neighborhoods. DOE failed to consider, for example,
 7 alternative truck routes, as well as the railroad
 8 station less than a quarter mile north of the site that
 9 is able to ship out contaminated soil. The station is
 10 accessible by routes that do not pass any residents.
 11 Instead, it only considers trucking the waste to a
 12 railroad line 50 miles away.

13 DOE must comply with the AOC and reject all of
 14 the cleanup alternatives imposed in making ES, as well
 15 as the no action alternative for soil remediation. DOE
 16 also must recognize that the (inaudible) SSFL, it does
 17 not have the authority to decide what the cleanup will
 18 be. Under both the Resource Conservation Property Act
 19 and the AOC, it's the California DTSC that makes the
 20 cleanup decision, not DOE.

21 Rocketdyne has left contaminated far too long.
 22 It's high time for the DOE to fulfill its cleanup
 23 obligation, honor the AOC that it signed, and ensure
 24 that the current, future generations are not at risk
 25 from the SSFL contamination. It's time to do it now.

1022-4
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1022-5

1022-3
cont'd

1022-6

1022-3
cont'd

1022-4

action alternatives evaluated is protective of the health and safety of the public and the environment. The No Action Alternative is included because it is required under NEPA and provides a basis for comparison with the action alternatives.

In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site. The use of RBSLS that do not include the indirect garden pathway is appropriate for this future land use.

In this Final EIS (see Chapter 2, Section 2.4), DOE has retained the Cleanup to Revised LUT Values Alternative, which uses chemical RBSLS based on an Onsite Suburban Residential Scenario without a garden pathway. The Final EIS also retains the Conservation of Natural Resources Alternative, but evaluates two scenarios. The Open Space Scenario is based on the future land use of Area IV and the NBZ as open space, consistent with Boeing's conservation easement and agreement (i.e., cleanup levels are based on exposure of an onsite recreational user as the receptor). The Onsite Suburban Residential Scenario is the scenario evaluated in the Draft EIS, that is, cleanup levels are based on a suburban residential scenario without a garden pathway. This latter scenario is conservative (i.e., more protective) of human health in terms of the intended use of the land as open space.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden. DOE chose to identify the 25 millirem per year in its risk-based alternative for clean in this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). The 25 millirem in a year exposure limit would represent a maximum possible dose. It did not take into account the Department's requirement to apply ALARA. DOE does not propose in the Final EIS radionuclide cleanup standards based on dose. DOE instead has conducted a risk-assessment based approach for soil remediation. DOE notes that the methodology used in the cleanup evaluation for the Conservation of Natural Resources Alternative in the final EIS results in doses that are well below the 25 millirem year upper limit and are in a range that is consistent with the CERCLA target risk range.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Clean up everything.
2 Thank you.
3 MS. LOWE: Thank you, Ms. Raskin. Okay. Jane
4 Londi.
5 MS. UNIDENTIFIED: She's in the bathroom.
6 MS. LOWE: Okay. Catherine Stettner and then Chris
7 Rowe.
8 MS. UNIDENTIFIED : Oh, I'm sorry. She is right
9 here.
10 MS. LOWE: Oh. Okay. Jane Londi.
11 MS. LONDI: I'm representing the Decision Solehood
12 of Rocketdyne, the Rocketdyne Cleanup Coalition, and the
13 San Fernando Workshop. I've been coming out here since
14 1989, and I've seen the same thing over and over again,
15 all these studies that are being done, and their -- and
16 examining over and over the quality of this, and the
17 quality of that, and we're not going no place, and it's
18 very sad, and mirror kind of thought me, that we live in
19 kind of society that we can't depend on the government
20 to take care of us, especially after they had made
21 promises. And I've heard a lot about the AOS (sic), the
22 -- and I felt so good that we had accomplished so much
23 until we got -- because they -- and then what happened
24 is history occurred over and over.
25 So, well, I'm 96 years old, and so I'll be

1022-3
cont'd

1023-1

Due to the uncertainty of risk at low dose and low dose rates risk assessments are performed under current regulatory guidance with a conservative assumption that cancer from exposure to radiation is linearly proportional to the total amount of radiation received with no threshold. Therefore, the risks for this EIS have been calculated for all exposures assuming a linear no-threshold model. However, in view of the rate of cancer in the general population (nearly 1 out of 2 in a lifetime), EPA CERCLA guidance has established that risks of getting cancer less than 1 in 1,000,000 are insignificant and that risks in the range of 1 in 10,000 to 1 in 1,000,000 may be acceptable when all impacts of remediation options are evaluated. Therefore, risks in that range are typically evaluated for acceptability during evaluation of alternatives and selection of a remedy for remediation.

For a discussion of uncertainties in risk assessment at low dose and low dose rates and the conclusions of the National Academy of Science's National Research Council Committee on the Biological Effects of Ionizing Radiation, the commenter is referred to "Uncertainty In Risk Assessment," a Position Statement of The Health Physics Society which can be found at http://hps.org/documents/riskassessment_ps008-2.pdf.

- 1022-5 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.
- 1022-6 DOE recognizes DTSC's authority over the cleanup at SSFL. DOE recognizes that DTSC needs to approve soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC and DOE-prepared RCRA closure plans for building demolition.
- 1023-1 Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD, which addresses steps that must be completed before cleanup can resume, including information on the steps necessary prior to DOE making a decision on alternatives for cleanup of Area IV and the NBZ. Briefly, DOE must complete an EIS (this EIS) and issue a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions:

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 coming out here probably until I'm a hundred, from the
 2 way things look. So, I hope that everybody will do
 3 their very best to get this thing cleaned up so we don't
 4 have to keep coming back and sitting through these
 5 meetings and trying to figure out all these statistics
 6 and stuff in here and everything. And, let's just not
 7 dilly dally like this over and over. Let's just get
 8 going.

9 MS. LOWE: Thank you, Ms. Londi. Catherine
 10 Stettner will be followed by Chris Rowe and then Kim
 11 Wong.

12 MS. STETTNER: Hi. My name is Catherine Stettner,
 13 and I am appalled that the DOE is trying to break out of
 14 its commitments to clean up the contamination at the
 15 Santa Susana Field Laboratory to the most protective
 16 standard. When people's lives are at stake, cleaning up
 17 to background is the only acceptable solution.

18 The DOE raises several unsubstantiated issues
 19 on the entire -- on the Administrative Order on Consent
 20 that it signed. The first is that supposedly is it's
 21 too difficult to find soil fill that does not exceed the
 22 AOC cleanup standard values. However, the DEIS showed
 23 that Gillibrand fill meets all the requirements with the
 24 minor exception of two constituents. The DOE itself said
 25 these constituents are not a risk for human health or for

1023-1
cont'd

1024-1

1024-2

(1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

1024-1 In this EIS, DOE does not propose breaking the 2010 AOC signed with its regulator, DTSC. However, NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. To meet this obligation this EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health as well as the protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). This latter approach, use of a risk assessment, is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 the environment. Furthermore, the AOC states if a soil
2 -- a backfill soil -- if a soil or backfill soil does
3 not meet all of the AOC cleanup values, the DTSC and DOE
4 will discuss this, and DTSC would determine the best
5 available fill, which it appears to be Gillibrand.
6 There is, therefore, no issue with finding the suitable
7 fill under the AOC and the DOE's argument is a
8 non-issue.

9 In regards to transportation, like Christina
10 mentioned, the DOE has also heavily inflated soil volume
11 estimates, and the DOE overestimated the number of truck
12 trips to scare the local community in support of the
13 DOE's efforts to avoid cleaning up the contamination
14 that it created. These slides they're trying to sell,
15 these alternatives, which means that it makes it seem
16 less appealing for them to clean up to background by
17 showing a larger number of trucks passing near their
18 homes instead of showing how much more dangerous it is
19 to leave these contaminants in the soil. This level of
20 -- this level of misrepresentation is reprehensible.

21 The DOE had at least 15 years to do their
22 first environmental assessment to address ways of
23 avoiding truck and pass our neighborhoods but have not.
24 It has also been barred -- but I feel it's necessary to
25 leave you this, but there are numerous routes that will

1024-2
cont'd

1024-2 Please see Section 2.3 "Suitable Backfill Soil" of this CRD for discussion of this topic.

1024-3 DOE used the geographic information system (GIS) database for Area IV and the NBZ to identify on a point-by-point basis, any sample location that had an exceedance of an LUT value (radionuclides published by DTSC on January 30, 2013 [DTSC 2013a] and chemicals on June 11, 2013 [DTSC 2013b]). The GIS system was then used to mark the locations of exceedances, map the extent of exceedance, develop areas and depth of exceedances, and then calculate soil volumes exceeding the LUT values. The sample volume development process was independently reviewed by remediation engineers and the volumes were validated.

1024-3

DOE's intent is not to alarm people, but it is true that the more soil that is removed to clean up the site, the larger the transportation effort (i.e., a larger number of truck trips) that would be required. The analyses in this Final EIS were performed to evaluate the potential impacts associated with the various alternatives for cleanup of Area IV and the NBZ. Results of the analyses allow a comparison of potential impacts and tradeoffs between alternatives. In the case of soil remediation, leaving soil containing low concentrations of chemicals and/or radionuclides on site reduces the number of truck trips from the site. Conversely, removing soil with low concentrations of chemicals and/or radionuclides results in more truck trips from the site. Under any of the three soil remediation action alternatives, Area IV and the NBZ would be cleaned up to a level that is protective of the public and environment (see Chapter 4, Section 4.9). The EIS also shows that the transportation risks are very small; Chapter 4, Section 4.8.1, and Appendix H of this EIS provide details of the transportation risk analysis.

1024-4

1024-4 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 only pass a few homes, avoiding residential
 2 neighborhoods, and the DOE has not considered these.

3 There is nothing about the conveyance part
 4 such a conveyor to send to a nearby rail line. The DOE
 5 refused to consider it.

6 There are rail lines a mile -- a mile or so of
 7 this site that can only be reached without passing a
 8 single home. The DOE refuses to consider this. The
 9 only rail option they consider is trucking material 60
 10 miles to Puente Hills to a rail depot that hasn't even
 11 been built yet.

12 I am infuriated by this blatant lie the -- the
 13 DOE is considering cleanup to anything besides what's
 14 protective standard. There is no excuse for not
 15 adhering to the legally binding AOC, and there's
 16 absolutely no better alternative because these proposed
 17 alternatives are merely insufficient but are partially
 18 interests.

19 Thank you.

20 MS. LOWE: Thank you. Chris Rowe will be followed
 21 by Kim Wong and then Bruce Rowe.

22 MS. ROWE: Chris Rowe. It is impossible to address
 23 in the time limits the misinformation that has been
 24 given out in this community for more than 30 years:
 25 There was no meltdown, and it's not a scientific term,

1024-4
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cont'd

1025-1

1025-1 DOE acknowledges the comment. Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS contain summaries of the 1959 SRE accident. Additional information can be found at http://www.etec.energy.gov/Operations/Major_Operations/SRE_Accident.html.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 and the only thing that was released was radioactive
2 gas, the Xenon and Krypton. DOE had an expert panel in
3 2009 and it addresses this. Dr. Jan Veah (ph), who was
4 a part of the advisory group, stated that there was no
5 waterfall effect or admitting the effect felt around the
6 site. There are no cancer -- no cancer clusters in our
7 area, Dr. Mathew's presentation on this for a DTS
8 meeting for the areas around the site.

9 But, more specifically, I've been reading the
10 ruling on SB 990, a Boeing suit, DTSC on SB 990, and it
11 was held up in the 9th Circuit Court of Appeals, and it
12 is my opinion based on reading that, that the AOCs are
13 target SB 990, and because SB 990 is found to be
14 unconstitutional, the AOCs internal would be
15 unconstitutional. And, there is a May 2012 EPA fact
16 sheet that says the site -- says it's restricted, and,
17 therefore, the public is not exposed to the
18 contamination they found.

19 I recommend reducing the number of trucks on
20 the site to 50 -- 50 per day maximum; out of state, all
21 this water we lose. I oppose the use of trains. I
22 oppose to the via the 210 Freeway to the 15. I want an
23 alternate route. I do support the immediate domination
24 -- the first thing you do of the -- the buildings, I
25 support that -- I think we -- that's your greatest

1025-1
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1025-1
cont'd

1025-4

1025-5

1025-2 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses and cancer clusters in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this EIS, which includes a summary of Dr. Mack's comments at a community meeting. He indicated that although it was not possible to completely rule out offsite carcinogenic effects from SSFL, no evidence was found of measurable offsite cancer causation resulting from emissions from SSFL or cancer causation from any environmental factor. Chapter 3, Section 3.9.5, of this Final EIS also summarizes a number of other studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties

1025-3 DOE entered into the 2010 Agreement on Consent under the authority granted the Department in the Atomic Energy Act (AEA). The AEA authorizes DOE to "advance the goals of restoring, protecting and enhancing environmental quality, and assuring public health and safety" (42 U.S.C. 7112(13)).

DTSC did not enforce SB 990 with respect to DOE, so DOE was under no duress attributable to SB 990 when the 2010 AOC was negotiated. The 2010 AOC states that DTSC agreed that compliance with the 2010 AOC would constitute DOE compliance with applicable provisions of the California Health and Safety Code (Section 1.6), including Senate Bill 990. However, after the law was declared unconstitutional, SB 990 was no longer enforceable.

1025-4 As discussed in Chapter 2, for the Final EIS DOE revised the EIS analysis to reflect a more realistic average of 16 heavy-duty truck round trips per day for soil removal activities, although on some days the number of dally truck shipments could increase to 32. DOE evaluated transport of waste from SSFL down Woolsey Canyon Road, then via multiple local roadways to local freeways. In addition to evaluating all-truck transport, DOE also evaluated the option of using a representative intermodal facility (Puente Hills Intermodal Facility) to allow transport of waste to more distant disposal facilities by train. Regarding the use of alternative transportation routes, please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Considering all remediation activities at Area IV and the NBZ (i.e., soil remediation, building removal, and groundwater remediation), daily shipments attributable to DOE remediation activities would not exceed 32 and generally would be considerably less. However, NASA and Boeing could also be making shipments of waste, backfill, and equipment during some of the same years that DOE would be making shipments

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 radioactive risk -- and the cleanup to background flex
 2 -- look-up tables, with the qualifiers that I have sent
 3 in to you, because people fear the radionuclides, that
 4 80,000 cubic yards of soil, I want to see the rads go
 5 first. Then I support a risk-based cleanup for the
 6 chemicals. And I -- I'm concerned about the soil
 7 volume, the air contamination, the particulate matter,
 8 the PM2.5, PM10 that will come. I know someone that's
 9 in -- with the moderate -- environmental remediation
 10 field, and he pointed out if you disturb an acre of a
 11 site how much particulate matter is in the air. And
 12 despite watering it down, I've seen these dust devils or
 13 whatever they're called in the Santa Susana Field Lab
 14 parking lot, so when the soil has been disturbed and
 15 it's loose, it's more likely to be airborne.

16 The EPA guidelines to NASA stated that there
 17 should be one cleanup standard for the whole site, and I
 18 believe that should be a risk-based cleanup so the --
 19 (Clock timer ringing)

20 MS. ROWE: -- there with the 2007 Consent Order and
 21 again only 8,000 of the --
 22 (Clock timer ringing)

23 MS. ROWE: -- 80,000 cubic yards of the soil is
 24 radioactively contaminated.

25 MS. LOWE: Thank you, Ms. Rowe. Kim Wong will be

1025-5
cont'd

1025-6

1025-5
cont'd

of waste, backfill, and equipment. As discussed in Chapter 2, Section 2.4.4, of this Final EIS, DOE, NASA, and Boeing have entered into a transportation agreement (Boeing 2015a) through which they would manage the daily number of trucks allowed on Woolsey Canyon Road to no more than 96. The potential cumulative impacts of site remediation by DOE, NASA, and Boeing are evaluated in Chapter 5 of the EIS, including the risks associated with transport of waste and material and the potential impacts on traffic in the SSFL area. DOE expects that daily heavy-duty truck shipments potentially as high as 96 per day from DOE, NASA, and Boeing would only occur for a few years.

Consistent with this estimate, DOE evaluated transport of waste from SSFL down Woolsey Canyon Road, then via multiple local roadways to local freeways. In addition to evaluating all-truck transport, DOE also evaluated the option of using a representative intermodal facility (Puente Hills Intermodal Facility) to allow transport of waste to more distant disposal facilities by train. Regarding the use of alternative transportation routes, please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of this topic and DOE's response.

Appendix H, Section H.13, of this EIS evaluates the conditions and suitability of the roads that are considered for transporting various materials from and to the site. These evaluations are summarized in Chapter 4, Section 4.8.2. These roads are built to the standard for heavy-duty trucks and are adequate for the vehicles that would be used during the cleanup activities, although some repairs to some roads may be required over the duration of site remediation operations. The operations at the site, including management oversight, the expected traffic volumes, and the consequential traffic speeds, would result in traffic flow conditions with minimum potential for accidents. Section H.13 also provides details on the potential impacts of increased traffic on the roads in the vicinity of SSFL (including potential pavement damage) as well as on the roads near the evaluated disposal and recycle facilities. The EIS indicates that impacts would be small. Water use by DOE for site remediation activities is estimated for each action alternative and combination of alternatives in Chapter 4, Section 4.1, and by DOE, NASA, and Boeing in Chapter 5, Section 5.5.1.

1025-5 DOE acknowledges your support for the Building Removal Alternative. DOE also acknowledges your support for remediation of radionuclide contamination in soil, a risk-based standard for chemicals, and a single cleanup standard for the whole site. DOE's purpose in preparing this EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 followed by Bruce Rowe and then William Bowling. Is Kim
2 Wong present? Okay. I can call for Kim later. Bruce
3 Rowe, followed by Bill Bowling, followed by Abraham
4 Weitzberg.
5 MR. ROWE: Bruce Rowe. I'm emeritus professor at
6 Pierce College in biological science.
7 I believe that the site should be cleaned up
8 on the basis of health risk. Standards of protecting
9 human health is protecting the environment. This must
10 be determined based on scientific studies, not anecdotal
11 ordinations. Most epidemiological studies have shown
12 that there's minimal to no off-site -- and I'm not
13 talking about on-site -- off-site risk from the SSFL
14 site. On-site risk is limited to certain areas of the
15 site and groundwater pollution. The risk should be --
16 these risks should be evicted by rocket poll and
17 scientifically sound methods.
18 As tragic as illnesses of a child or an adult
19 is, anecdotal conclusions that a particular illness is
20 caused by a particular environmental cause of an
21 innocupational types of things -- and I'm not talking
22 about 1959 over people who worked at the site when it
23 was active -- we have no scientific views whatsoever
24 except as a starting point for scientific studies to see
25 if the correlation involves causation. In my opinion,

1026-1

1026-2

- 1025-6 The Final EIS demonstrates that by complying with applicable Ventura County Air Pollution Control District (VCAPCD) Rules, combustive and fugitive dust emissions generated from cleanup activities proposed by DOE would produce less than significant air quality impacts on locations outside of the SSFL boundary. Given the heightened concerns the public has regarding the environmental effects of the proposed soil excavation activities, DOE proposes to achieve very high control levels on all sources of fugitive dust. The need to comply with VCAPCD Rule 55, which restricts emissions of fugitive dust from being visible beyond the property line of a source, also would require DOE to achieve extremely high control levels on all sources of fugitive dust. The proposed cleanup activities would adhere to a fugitive dust control plan that identifies a variety of measures to minimize emissions and therefore to comply with VCAPCD Rule 55. For example, personnel would visually monitor the proposed cleanup activities on a real time basis and if there were any noticeable increase in fugitive dust emissions, they would quickly implement additional measures to mitigate these emissions. As a result, these controls and restrictions would ensure that the proposed cleanup activities would minimize emissions of fugitive dust impacts at offsite locations.
- 1026-1 DOE acknowledges your support for site cleanup on the basis of health risk. DOE's purpose in preparing this Final EIS is to evaluate alternatives for cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.
- 1026-2 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 such studies have so far failed to show causation
 2 between pollutants at the SSFL site and increased risk
 3 of cancers and other illnesses off-site in the
 4 contemporary period of time.

5 Public opinion also should not drive public
 6 health policy, but many are not always informed or
 7 qualified to make decisions on scientific issues that
 8 have been allowed in today. If a majority of people
 9 think that manmade climate change is not happening, that
 10 does not mean that climate change is not happening.
 11 Climate scientists who are a very small percentage of
 12 the total population are better able to make that
 13 conclusion. In the same way, epidemiologists, chemists,
 14 and public health professionals are better at evaluating
 15 health risk than the general population.

16 In conclusion, I believe that the site should
 17 be cleaned up using balanced criteria that protects
 18 health -- human health and takes into consideration what
 19 the end use of the site will be in that analysis. I
 20 also believe that it would be tragic to apply the most
 21 stringent cleanup and thereby destroy a rare focused-
 22 based setting in the city, a space that acts as a
 23 wildlife corridor while if no -- no health benefit is
 24 gained.

25 It would be also be a tragedy to lose cultural

1026-2
cont'd

1026-1
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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 resources through the destruction of archaeological
2 sites, many of which might not have been discovered
3 today.
4 The dust released into the air make it
5 inviable. The pollutions from trucks and the potential
6 destruction of watershed and other factors might lead to
7 an increase in off-site --
8 (Clock timer ringing)
9 MR. ROWE: -- health risks.
10 MS. LOWE: Thank you very much. Okay. Bill
11 Bowling will be followed by -- William Bowling -- I'm
12 sorry -- by Abraham Weitzberg and then Ronald Ziman.
13 MR. BOWLING: It's Bill, as you know.
14 MS. LOWE: I'm sorry. All right.
15 MR. BOWLING: Oh, serious. Serious. Can you look
16 up Santa Susana, if you would like?
17 MS. LOWE: Okay. We're ready when you are.
18 MR. BOWLING: Okay. I'm William Preston Bowling.
19 I founded the Aerospace Contamination Museum of
20 Education. It's kind of an on-line document storage
21 website.
22 And today I want to talk about Santa Susana
23 Field Lab and -- not to press Stephe, but when she was
24 talking, she was talking about cancer causing chemicals.
25 That's a quote. And, I hope that the court reporter was

1026-1
cont'd

1026-3

1026-3 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 recording that. And, in the same breath, you're saying
 2 what levels do we clean this up to.

3 And, I think that we should clean it up to
 4 background levels because there is no safe levels for
 5 these cancer causing chemicals, not to mention the
 6 radionuclides. We should stick to the AOCs, and I think
 7 the whole site needs to look towards the AOCs, and
 8 Boeing should do the right thing and clean up to those
 9 same levels as well.

10 There's -- like Chris Rowe said, there's a lot
 11 of misinformation in the community, and one of them is
 12 about the road in Woolsey Canyon. It was built to haul
 13 trucks up and down there. It was built by government
 14 contractors.

15 But, there are other alternatives we -- that
 16 we could look at to transport the waste up and down.
 17 There can be conveyor systems that go straight to the
 18 rail line down in Simi Valley or even a direct line into
 19 the Chatsworth landfill or anything like that.

20 It was very sad to see these kids come up and
 21 talk about what they went through. And if we clean this
 22 up to a background level, then we don't have to see this
 23 happen ever again, to have these kids come up and tell
 24 their stories, and it was just -- it really hit me
 25 hard.

1027-1

1027-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

1027-2

1027-2 Thank you for your comment. The scope of this EIS is limited to cleanup of DOE's portions of SSFL, Area IV and the NBZ. Because the comment/statement is not on the scope or content of this Final EIS, no response is provided. It has been included in the Administrative Record for the EIS.

1027-3

1027-3 DOE agrees with the commenter that the selected roads (e.g, Woolsey Canyon and Roscoe Boulevard) are capable of handling large trucks, especially those that would be used during the cleanup activities. Appendix H, Section H.13, of this EIS provides additional details on the roads and the potential impacts from hauling materials on these roads.

1027-4

1027-4 Please refer to Section 2.9, "Options for Transportation of Waste from SSFL," of this CRD for a discussion of transportation issues and DOE's response.

1027-5

1027-5 DOE acknowledges your concerns and refers you to Section 2.1, "Preferences for Cleanup," of this CRD regarding your preference for cleanup to a background level. Also refer to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. All of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Thank you.

2 MS. LOWE: Thank you. I just want to apologize
3 for -- you can tell what I was using for a timing
4 device, and so I apologize for the interruption in the
5 seriousness. I know it's hard to speak in public.

6 So, with that, Mr. Weitzberg.

7 MR. WEITZBERG: The name is Abraham --

8 MS. LOWE: Oh, hang on. Ron Ziman will be next and
9 then Kristin Story. Go.

10 MR. WEITZBERG: My name is Abraham Weitzberg. I'm
11 mostly retired, living at Woodland Hills, and I worked
12 at SSFL on space reactors from 1962 to 1965.

13 I would like to commend the Department for its
14 diligence in preparing the draft which presents
15 evaluations of reasonable remediation alternatives in
16 strict compliance with NEPA. The technical data
17 accurately reflects the information that has been
18 developed in recent years, and the evaluations are
19 sufficiently detailed to allow the decisionmakers to
20 compare benefits, risks, and costs of the alternatives
21 in reaching their decisions. In choosing the preferred
22 alternative and issuing its Record of Decision, the
23 Department should rely on the technical information
24 presented in the DEIS and ignore the widely disseminated
25 but false information about reported public health

1028-1 1028-1 Thank you for your comment.

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 effects.

2 The DEIS concludes that for a hypothetical

3 future suburban resident, "Cancer risk and toxicity

4 impacts from chemical and/or radionuclides in Area IV

5 and the NBZ are comparable to or less than the risk

6 determined for background soil." This clearly means

7 that SSFL now poses no additional risks from soil to

8 off-site residents, and that it is questionable whether

9 any soil removal is necessary to protect unlikely future

10 on-site residents under any land use scenario.

11 A second conclusion is that the AOCs as

12 written are unworkable and are in need of revision.

13 This is based on the accepted error rate in the sample

14 analysis of five percent for each contaminant of

15 concern, which means that DOE would likely be

16 remediating clean soil, not just contaminated soil.

17 Also, if the point-by-point, AOC remediation decision

18 process was applied to the background study locations,

19 42 percent would be declared contaminated and subject to

20 soil remediation.

21 DOE concluded that low AOC LUT -- that's Look-

22 Up Table Values -- resulted in data showing that almost

23 the entirety of Area IV to exceed an AOC LUT value for

24 at least one chemical. DOE also concluded that it

25 appears unlikely that replacement soil meeting the AOC

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 requirements can be found. The absurdity of the
2 exceedingly low AOC LUT values should be apparent to any
3 objective observer or a decisionmaker.
4 Based on the discussion of environmental
5 consequences and cost benefit analysis, I conclude that
6 the DOE preferred alternative should be the Low Impact
7 Combination of Conservation of Natural Resources for
8 soil, plus Building Removal, plus Monitored Natural
9 Attenuation for groundwater. While some might suggest
10 that the Cleanup to Revised LUT Values for soil, which
11 removes radionuclides to AOC levels and chemicals to
12 risk-based levels, represents a reasonable compromise --
13 (Clock timer ringing)
14 MR. WEITZBERG: -- I contend that no compromise is
15 necessary simply to assuage the angst of individuals who
16 have an irrational fear of radiation, no matter how
17 small or close to background the dose. As a taxpayer, I
18 believe that the Department should not waste the
19 additional estimated 44 million, damage the additional
20 acres, or inflict --
21 MS. LOWE: Thank you.
22 MR. WEITZBERG: -- the additional truck traffic --
23 MS. LOWE: Thank you, Mr. Weitzberg.
24 MR. WEITZBERG: Thank you.
25 MS. LOWE: Ronald Ziman will be followed by Kristin

1028-2

1028-2

DOE acknowledges your support for the combination of the Conservation of Natural Resources, Building Removal, and Groundwater Monitored Natural Attenuation Alternatives. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

3-1647

Section 3 - Public Comments and DOE Responses

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Story and then Robert Dodge.

2 MR. ZIMAN: I'm Ronald Ziman. I'm a physician and

3 a scientist. I'm boarded in internal medicine and

4 neurology. I'm a resident of Bell Canyon, stakeholder,

5 co chair of the SSFL Community Advisory Group.

6 Bell Canyon is in the direct line of fire.

7 We're at the doorstep of SSFL. We are downwind,

8 downstream, and downhill from SSFL. It is paramount to

9 protect public health, and then after public health, the

10 environment, the natural, and cultural resources,

11 historical resources, and proper cleanup needs to be

12 balanced in order to properly address these complete --

13 competing goals.

14 I'm not here to criticize the AOCs, but as the

15 2017 deadline clearly will not be met, it will need to

16 be renegotiated to address the extremely low values,

17 among other things, in the look-up tables. The lab

18 confidence intervals of these extremely low levels

19 erodes the ability to clean up the site to background or

20 detect -- to detect standards. It is a scientifically

21 poor methodology. Many are talking of risk but don't

22 want a risk-based clean up. That doesn't make sense to

23 me.

24 Air monitoring off-site to look at the

25 potentially -- should look at the potentially

1029-1

1029-2

1029-1 Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts.

1029-2 This Final EIS demonstrates that by complying with applicable Ventura County Air Pollution Control District (VCAPCD) Rules, combustible and fugitive dust emissions generated from cleanup activities proposed by DOE would produce less than significant air quality impacts on locations outside of the SSFL boundary. Direct transport of these emissions to a distance of nearly one mile to the nearest residence or farther would further dilute these pollutant concentrations to well below any level of health concern.

The proposed cleanup activities would adhere to a fugitive dust control plan that identifies a variety of measures to minimize emissions and therefore to comply with VCAPCD Rule 55 – Fugitive Dust. Personnel would monitor the proposed cleanup activities on a real time basis and if there were any noticeable increase in emissions, such as fugitive dust, they would quickly implement measures to mitigate their intensities, thereby avoiding any substantial air pollutant exposure to the public.

DOE, NASA, and Boeing each implemented their respective baseline air monitoring programs in early 2018 for their areas of responsibility at SSFL. For DOE the program includes a meteorological station within Area IV and four air monitors along the perimeter of Area IV (as described in NASA/Boeing/DOE 2017). The perimeter stations include two along the north border near the SRE and RMHF, one along the western border, and one along the southern border. DOE is operating the system to establish a pre-remediation baseline. The system will continue to operate during remediation activities to monitor any potential air pollutant releases of concern. If the air monitoring network indicates any elevated levels of air pollution, onsite staff would take action to mitigate the releases to acceptable levels. A description of the DOE air monitoring system was added to Chapter 3, Section 3.6.1 of this Final EIS.

Air quality impacts from proposed offsite haul truck transport would be minimal, due to the relatively low emission rates of these vehicles. As discussed in Final EIS Chapter 4, Section 4.6.4.2, the air quality analysis estimates that unmitigated diesel particulate matter (DPM) emissions generated by a 2023 average California truck fleet within the entire South Coast Air Basin analysis domain under the nearby disposal site scenario would amount to less than 31 pounds per year, or about 0.4 pounds during a peak day (based on 32 truck round trips per peak day) (Leidos 2018b; Tables 1.A-23 and 1.A-24; [DPM is about 20 percent of the PM10 values in these tables]). These emissions would occur over about 160 miles of roadway that span a large portion of the SCAB. As a result, populations adjacent to roadways proposed for the transport of materials from

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 contaminated communities, not just be air monitoring on
2 site. It needs to include looking for Valley Fever,
3 which is endemic to this area, and infectious via the
4 air route.

5 Though I favor the conserve -- Conservation of
6 Natural Resources alternative, it could be argued in
7 view of no evidence of contaminants being present in or
8 affecting Bell Canyon, Runkle Canyon, and Simi Valley,
9 and likely San Fernando Valley, one could argue strongly
10 for the No Action Monitoring alternative, which would
11 benefit the site, save it for use as open space by
12 natural attenuation, and preserve the environment,
13 natural, cultural, and historic resources.

14 No backfill has been identified, as has
15 already been mentioned, that really meets all of the
16 look-up table standards, and that should be an
17 indication of the unrealistic cleanup which is being
18 dictated by the AOCs in their current form.

19 Cancer is always a concern. I have my own
20 family members with cancer but clearly not related to
21 SSFL. My heart goes out to those today who have family
22 members and who are themselves affected by cancer, but
23 it must be remembered that cancer is multifactorial and
24 even the Morgenstern/Cohen studies from UCLA --
25 (Clock timer ringing)

1029-2
cont'd

1029-3

1029-4

the SSFL would be exposed to very low DPM emissions from project haul trucks and likely would experience no noticeable health effects from these emissions.

Regarding the request to test for the presence of Valley Fever, this Final EIS Section 4.9.2.6 states that there are no commercially available tests to reliably test the soil for Coccidioides spores before working in a particular location (CDC 2014; HESIS 2013). Soil testing is currently only done for scientific research, and the available methods to detect Coccidioides in the soil do not always detect the spores, even when they are present (CDC 2014). Because the spores may be present in the soil, reasonable precautions would be taken to reduce potential for exposure, including the fugitive dust controls mentioned above. For example, the fugitive dust control plan mentioned above will include measures to reduce the risk of spreading Valley Fever that focus on fugitive dust controls recommended by the VCAPCD to minimize fungal spore entrainment, as well as minimizing worker exposure (VCAPCD 2003).

Due to the low air pollutant impacts on nearby residents that would occur from the proposed cleanup activities, DOE's visual monitoring and perimeter air monitoring stations are adequate to identify the need for any corrective actions to mitigate unacceptable air emissions.

1029-3 DOE acknowledges your support for the Conservation of Natural Resources Alternative. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please also note that DOE does not own the property in Area IV or the NBZ and cannot determine the ultimate land use for the property. As discussed in Chapter 1, Section 1.5, of this EIS, the property owner, Boeing, intends to preserve the land as open space for the public's benefit. In 2017, The Boeing Company (Boeing) and North American Land Trust recorded two Grant Deeds of Conservation Easement and Agreements (conservation easements) with Ventura County (Ventura County 2017a, 2017b) that permanently preserve as open space nearly 2,453 acres of land that Boeing owns at SSFL, including Area IV and the NBZ. The conservation easements are legally enforceable documents that, among other restrictions, forever prohibit residential, agricultural, or commercial development or uses of the site.

1029-4 DOE acknowledges your comment and refers you to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD, which discusses the studies referred to in the

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 MR. ZIMAN: -- indicated that they couldn't
 2 attribute the occurrence of those cancers to SSFL for a
 3 multitude of reasons.
 4 Thank you.
 5 MS. LOWE: Thank you, Mr. Ziman. Kristin Story.
 6 MS. STORY: My name is Kristin. My name is Kristin
 7 Story. I'm a public school teacher and a mother and I'm
 8 not irrational. I'm not an irrational person. I'm a
 9 very rational person. I live in a world where I look at
 10 facts. I study up on things. I pay attention to
 11 scientists and doctors, people who I trust to know what
 12 is dangerous and what is not. I have a Paulie
 13 Conbeaversite (ph), who is also a teacher. She is not
 14 -- was not in place now due to an illness. She lived in
 15 Bell Canyon, and when Boeing lied to her face and said
 16 that there was no cancer cluster danger because it was
 17 on the other side from where she was living, she packed
 18 up her house, her husband, and she sold that house, and
 19 got out of there with their two small children. Thank
 20 God.
 21 I am in outrage the DOE's proposing to
 22 breaking its AOC commitments to clean up all of the
 23 radioactive, toxic chemical contamination. It's an
 24 outrage. The AOCs expressly prohibits consideration of
 25 any leave-in-place alternatives, yet DOE's proposing to

1029-4
cont'd

1030-1

comment. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

1030-1 In this EIS, DOE does not propose breaking the 2010 AOC signed with its regulator, DTSC. NEPA requires Federal agencies that propose major actions that could possibly significantly affect the human environment to prepare EISs. In developing an EIS, Federal agencies are required to "rigorously explore and objectively evaluate reasonable alternatives" (40 CFR 1502.14) to meet the purpose and need for agency action. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for a discussion of soil remediation alternatives, including an alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

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1 leave in place huge amounts of contamination. DOE
2 estimates that it could take up to 70 years for specific
3 toxic materials to attenuate to required levels. I'm
4 glad attenuation was just brought up. It's outrageous.
5 The DOE wants to leave the hazardous material, which
6 have already been contaminating SSFL for 70 years, in
7 place another 70 years, so the nearby communities would
8 have faced 140 years of migration SS exposure. That
9 means for all our lifetimes, the contamination that DOE
10 created will be in the midst of our community, migrating
11 down to expose people, and they have little children,
12 and the environment. But even the 70-year estimate for
13 leaving the toxic total petroleum hydrocarbons, or TPHs,
14 to supposedly attenuate is false. DOE's slide show,
15 Particular Report as the basis for that conclusion,
16 when, in fact, you simply cite to another report which
17 doesn't actually conclude the hazardous materials will
18 degrade in 70 years. In fact, that report said it could
19 take very much longer, because the easiest materials to
20 degrade long ago did, and what is now left degrades very
21 slowly, if at all. In fact, when the study measured the
22 degradation rate, given the actual conditions of the
23 site, it found no -- no natural attenuation at all. So,
24 what do we get? DOE misrepresenting the facts. That's
25 a fact. That is what is sad as I -- as a quote from a

|| 1030-1
cont'd

1030-2 1030-2 The 2010 AOC allows for onsite treatment of soils and natural attenuation was included as a treatment option at the suggestion of DTSC staff. The Draft EIS states that natural attenuation would be applied to soil with "low concentrations" of TPH's where they are the only chemical exceeding comparison criteria. See Chapter 2, Section 2.3.2 of this Final EIS for additional information. Based on soil treatability studies, it appears that monitored natural attenuation will be able to degrade TPH concentrations in these soils to below their AOC LUT values within 70 years. Soils with higher concentrations of TPH would be removed, as they would take longer than 70 years to attenuate.

3-1651

Section 3 - Public Comments and DOE Responses

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1 DOE document that we -- that quote from the Ventura
 2 County Star, this last article that was done. Whether
 3 it is 70 years DOE wants to leave the TPHs in place or
 4 far longer is totally and completely unacceptable.
 5 Also, the great majority of the contamination DOE now
 6 proposes to walk away from, it -- it admits that there
 7 is basically no attenuation at all, that it will be here
 8 for all practical purposes for eternity, capable of
 9 continued migration off-site. This isn't an irrational
 10 statement I'm making. This is fact that's --
 11 (Clock timer ringing)
 12 MS. STORY: -- gone final. Thank you.
 13 MS. LOWE: Thank you. Robert Dodge will be
 14 followed by Jim Summers and then Margery Brown.
 15 MR. DODGE: My name is Rob Dodge. I'm a family
 16 physician in Ventura, and I'm the president of
 17 Physicians for Social Responsibility Los Angeles.
 18 For over 30 years PSRLA has advocated for a
 19 cleanup of the Santa Susana site that's fully protective
 20 of the public health. That standard was met by the 2010
 21 Agreement on Consent that DOE signed which stipulates
 22 that DOE's portion of the Santa Susana Lab will be
 23 cleaned up to background levels of contamination, that
 24 is any contamination that is detected will be cleaned
 25 up. In the DEIS risk assessment, the DOE is either

1030-3

1030-3 Please see the response to comment 1030-2. The Cleanup to Revised LUT Values Alternative and Conservation of Natural Resource Alternative would remove soils that present a risk to human health and the environment in accordance with the designated future use as open space. Chemicals remaining in the soil would be below human health and ecological risk levels.

1031-1

1031-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD.

The "Cleanup to AOC Look-Up Table Values Alternative" incorporates all of the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or to levels determined by laboratory capabilities. Please refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for an explanation of how the Cleanup to AOC LUT Values Alternative complies with the 2010 AOC. As discussed in that section, the 2010 AOC does allow onsite treatment (e.g., attenuation) of contamination and natural attenuation was

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Section 3 – Public Comments and DOE Responses

1 incompetent, purposely misleading, or both, and neither
2 is acceptable. DOE has claimed today and vis-a-vis
3 articles -- vis-a-vis Star article that it is complying
4 with the AOC, and all of its alternatives are protective
5 of public health, but that is not true. All four of the
6 options that DOE has presented violate the AOC and risk
7 public health.

8 DOE says that option one entails cleaning up
9 933,000 cubic yards, but on Page 29 of the DEIS, the
10 Summary I missed, that the total soil contaminated is
11 1,400,000 cubic yards. That would be one half a million
12 cubic yards of contaminated soil in place which violates
13 the AOC. DOE tries to justify this by declaring that
14 the soil may be subject to natural attenuation or
15 degrading over time, and by grossly misrepresenting the
16 AOCs biological exemption, which is strictly limited in
17 the AOC, and which they do not qualify for.

18 Option two claims to clean up the site to
19 risk-based screening levels for suburban residential use
20 and that the cancer risk would be one in a million or 10
21 to the minus six. But a footnote on Page S-31, number
22 22, of the DEIS Summary indicates the DOE is not as
23 claims following the DTSC approved Standard Risk
24 Assessment Methodology and has left out the major
25 required exposure pathways and using values that are a

1031-1
cont'd

1031-2

included as a treatment option at the suggestion of DTSC staff. In this EIS DOE is not “grossly misrepresenting the AOCs biological exemption.” The exemption process presented in the Draft EIS was jointly developed through a series of meetings attended by USFWS, CDFW, and DTSC. Both USFWS and CDFW provided their concurrences for the process. This process addresses both the biological exemptions of the AOC and DOE’s obligations to meet Federal, state and local laws and regulations for the protection of biological resources.

Also, refer to Section 2.4, “Application of Exemptions under the 2010 Administrative Order on Consent,” of this CRD. DOE notes that the process developed for application of the exemptions does not mean that no cleanup would occur in exemption areas, but involves focused cleanup within those areas of any contamination that exceeds risk levels that typically require remediation.

1031-2 As explained in Chapter 4, Section 4.9 and in Appendix G of the Draft EIS, DOE used suburban residential RBSLs or risk slope factors based on the direct exposure pathways and without the indirect garden pathway to evaluate potential impacts to an onsite receptor. In April 2017, Boeing made a legally binding commitment to a conservation easement held by North American Land Trust that permanently preserves as open-space habitat nearly 2,453 acres Boeing owns at SSFL, including Area IV and the NBZ, forever prohibiting residential, agricultural, and commercial development or uses of the site (Ventura County 2017a, 2017b). The use of RBSLs that do not include the indirect garden pathway is appropriate for this future land use.

The comment that RBSLs used in the Draft EIS are “a thousand times higher risk than the one-in-a-million risk assessment.” is in error. The RBSL concentrations used in the Draft EIS were taken from the DTSC-approved Standard Risk Assessment Manual (SRAM) developed for use at SSFL. Risk assessments are developed using a most likely future land use consideration and are consistent to what EPA would do at CERCLA sites and DTSC would do at other DTSC-regulated sites in California.

In Chapter 4, Section 4.9 of this Final EIS, DOE has included an assessment of potential impacts to an offsite suburban resident; this analysis does include the indirect garden pathway, recognizing that local residents may get some portion of their food from a home garden.

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1 thousand times higher than the standard suburban
 2 residential goals. That means a thousand times higher
 3 risk than the one-in-a-million risk assessment.

4 Option three is most certainly not health
 5 protective. The EPA states that the exposure to 25
 6 millirem a year is not health protecting and should not
 7 be used for cleanup. You have exposure to 25 millirem,
 8 it's the equivalent of a dozen unnecessary chest X-rays
 9 per year every year over an average life span. And
 10 because the DOE uses averaging, which they are precluded
 11 from doing, and keeps out the garden pathway required to
 12 the individual and representing 99 percent of the dose,
 13 it is closer to hundreds of unnecessary chest X-rays per
 14 year, at a lifetime is thousands or tens of thousands
 15 times higher than the DOE claims. This is unacceptable.

16 The National Academy of Scientists has
 17 concluded there is no safe level of radiation, no safe
 18 level. Every amount exposes you to some increased risk
 19 over time having cancer, particularly for pregnant women
 20 and children. The DOE must comply by the AOC and clean
 21 up --

22 (Clock timer ringing)

23 MR. DODGE: -- all of the contamination.

24 MS. LOWE: Thank you, Mr. Dodge. Jim Summers will
 25 be followed by Margery Brown and then Rick McFadden.

1031-2
cont'd

1031-3

1031-1
cont'd

1031-3 See the response to comment 1031-2 for a discussion and response to concerns over choice of exposure pathways.

The Conservation of Natural Resources Alternative (both scenarios) would result in the removal of all soil containing chemicals and radionuclides at concentrations posing a risk to human health and the environment in excess of levels requiring remediation. The soil not excavated would be similar to soil that EPA would not excavate at CERCLA sites or DTSC at comparable sites in California. DOE chose to identify the 25 millirem per year in its risk-based alternative to cleanup this EIS, consistent with the upper limit for dose-based release criteria under DOE requirements (DOE Order 458.1). DOE notes that the Conservation of Natural Resources Alternative (both scenarios) analysis in this Final EIS is a risk-based analysis and results in radiological risks in the 10⁻⁵ range; this would correspond to a dose much lower than 25 millirem per year. Please refer to Section 2.6, "Comparison of Radiation Doses," of this CRD for further discussion of the 25 millirem per year dose-based release criteria.

Regarding the comment about averaging and not including the garden pathway, when a risk assessment is performed, EPA Risk Assessment Guidance (EPA 1989) does allow for some averaging and prescribes the use of an upper confidence limit (UCL) on the arithmetic average (UCL95) and only suggests the use of a maximum value as a screening tool. And as noted in the response to comment 1031-2, conservation easements that include Area IV and the NBZ prohibit residential, agricultural, and commercial development or uses of the site (Ventura County 2017a, 2017b). Therefore, even though DOE includes a conservative analysis of a hypothetical onsite resident, it is appropriate to not include a garden pathway. It is important to note that under any of the soil remediation alternatives, those soils with the higher levels of chemical and/or radioactive constituents, that is, those that would pose a risk to human health or the environment, would be removed. Soils that would be left on site would have lower concentrations of chemical and/or radioactive constituents.

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1 MR. SUMMERS: My name is Jim Summers. I'm from
2 Granada Hills, not from around West Hills or -- or Simi.
3 But, well, I'm just shocked that this is even
4 going on. I've been going to these hearings and it's
5 over 20 years ago. This should have been done, done to
6 the standards the community wants and what is
7 reasonable. And, I agree there are no safe levels of
8 radiation to human beings. I went to medical school in
9 Sweden. I actually was there when Chernobyl happened.
10 They would never let anything like this happen in
11 Sweden.
12 It's your ability. You're our government.
13 You're the ones that protect us. We pay your taxes.
14 You guys won't lose your jobs. Nothing will happen to
15 you, and you may not get a pay raise, but you should do
16 what the community is requesting and what you agreed to.
17 And, I would just like to say that coming from
18 outside the area, it's a little bit hard for me to see
19 this, and an injustice here -- to quote Dr. Martin King,
20 an "Injustice anywhere is a threat to justice
21 everywhere."
22 Thank you.
23 MS. LOWE: Thank you: So Margery Brown, followed
24 by Rick McFadden, followed by Elena Semper.
25 MS. BROWN: My name is Margery Brown. I'm on the

1032-1

1032-1 Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for information on alternatives and preferences for cleanup. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

1032-2

1032-2 Due to the uncertainty of risk at low dose and low dose rates, risk assessments are performed under current regulatory guidance with a conservative assumption that cancer is from exposure to radiation is linearly proportional to the total amount of radiation received with no threshold. Therefore, the risks for this Final EIS have been calculated for all exposures assuming a linear no-threshold model. However, in view of the rate of cancer in the general population (nearly 1 out to 2 in a lifetime), EPA CERCLA guidance has established that risks of getting cancer less than 1 in 1,000,000 are insignificant and that risks in the range of 1 in 10,000 to 1 in 1,000,000 may be acceptable when all impacts of remediation options are evaluated. Therefore, risks in that range are typically evaluated for acceptability during evaluation of alternatives and selection of a remedy for remediation.

1032-1 cont'd

For a discussion of uncertainties in risk assessment at low dose and low dose rates and the conclusions of the National Academy of Science's National Research Council Committee on the Biological Effects of Ionizing Radiation, the commenter is referred to "Uncertainty In Risk Assessment," a Position Statement of The Health Physics Society which can be found at http://hps.org/documents/riskassessment_ps008-2.pdf.

Section 3 - Public Comments and DOE Responses

3-1655

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1 board of the West Hills Neighborhood Council, but I'm
 2 speaking only for myself.

3 I just finished my 30th year of being a Red
 4 Cross disaster worker. I've been in the floods and the
 5 earthquakes and the fires, and I have never encountered
 6 a disaster like this one, where you can exactly talk to
 7 the people, some of them who caused some of the disaster
 8 that we're talking about today. This is really unusual.

9 I would not take away anything good the
 10 Department of Energy has done. And, one of those things
 11 was this: In 2010, you had somehow had some kind of a
 12 moment of enlightenment where you were willing to sign
 13 this agreement of the AOCs voluntarily and clean up to
 14 background. What's happened since then? The problem is
 15 that I recognize that we're -- what we're really having
 16 here today is not a scientific discussion or a legal
 17 discussion or a discussion of cleanup plans. We're
 18 having a talk about money, millions of dollars of it
 19 that's sitting out in the middle of the floor here for
 20 everybody to see, millions of dollars that you could
 21 save by any one of the four plans that you put into
 22 effect, all of which break the AOCs and do not protect
 23 human health.

24 You want to talk about risk? I'll tell you
 25 who's taking the risk. The people who live around the

1033-1

1033-2

1033-3

1033-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information.

1033-2 As a Federal agency, DOE is required to evaluate and justify major expenditures of Federal dollars. Because the AOC cleanup is not the normal way DOE, EPA, or California DTSC performs soil cleanups, DOE evaluated the costs and benefits of the AOC cleanup versus what is normally done (that is, a cleanup that is based on risk and future land use). That analysis demonstrated that the AOC cleanup would be much more expensive and with minimal additional protection of public health and the environment. The Cleanup to AOC LUT Values Alternative included in this Final EIS does comply with the 2010 AOC; please see Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD.

1033-3 DOE acknowledges your concerns and refers you to Section 2.7, "Offsite Impacts," of this CRD for a discussion of offsite contamination and risk and to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ. The purpose of this EIS is to evaluate alternatives for completion of cleanup of those portions of SSFL for which it is responsible, Area IV and the NBZ. All of the action alternatives evaluated in this EIS would result in a cleanup of Area IV and the NBZ that would be protective of public health and safety and the environment.

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1 field lab in the Valley are the ones taking all the
2 risk. The four plans leave tremendous amounts of -- oh,
3 well, the radiation, CVS, strontium-90, plutonium, the
4 most deadly of the deadly, plus all the toxic chemicals.
5 The risk, you know, is in the neighborhoods all around.
6 There is no way that you can walk away from an agreement
7 that will protect human health and still cover the
8 beast. Okay?
9 I would urge you to stay with it even though
10 we know that the -- you are not going to make the final
11 decision, that the state, being DTSC, or EPA will make
12 it. So, please give the risk a lot of thought.
13 Thanks.
14 MS. LOWE: Thank you. Rick McFadden will be
15 followed by Elena Semper and then Tom Nachtrab. Is Rick
16 McFadden not present? Okay. Then Elena Semper. Elena
17 will be followed by Tom Nachtrab and then Mark Daww.
18 MS. SEMPER: Hi. My name is Elena Semper. I spoke
19 the other day but I would like to reiterate. I'm a
20 conduct reality project leader, and I'm on the Porter
21 Ranch Neighborhood Council Sustainability Committee. As
22 a near life-time Valley resident, I'm speaking on behalf
23 of myself.
24 I fully support the AOC and urge you to do the
25 same. DOE's alternatives are not in compliance and risk

1033-3
cont'd

1033-1
cont'd

1034-1

1034-1 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," of this CRD. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment.

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1 human, animal, and environmental health. We need this
 2 long-term solution and not alternative pockets risk.
 3 Truck conditions and volumes are countable, and you
 4 can't mitigate radionuclides. I've lived in the Valley
 5 since 1970 and its various tall and major earthquakes,
 6 including the Northridge quake, which rose the ground 12
 7 feet. This critical earthquake fault runs under Aliso
 8 Canyon and are heavy winds. There's no guarantee now or
 9 decades to come, but one -- centuries. Your alternative
 10 methods and solutions resemble alternative facts, and
 11 they remain opposite of quality of life. You mentioned
 12 educating the public over there, as I understand,
 13 cleaning up the site. Now the majority of the public
 14 want the site thoroughly cleaned up and fully comply
 15 with AOs.

16 Thank you.

17 MS. LOWE: Thank you. Tom Nachtrab, then Mark
 18 Dauw, then Farideh Kioumehr. I'm sure I gnawed that
 19 one. Yeah. Okay. Mr. Nachtrab first.

20 MR. NACHTRAB: I'm Tom Nachtrab. I live in
 21 Chatsworth, and I'm a director of the Santa Susana
 22 Mountain Park Association, SSMPA. I have three brief
 23 comments focusing on the present and moving forward in
 24 the future:

25 Regarding the EIS as a document, for it's, you

1034-1
cont'd

1034-2

1034-1
cont'd

1034-2 Earthquakes are a hazard in California; however, as stated in Chapter 3, Section 3.2.1.3 of the Draft EIS, Geologic Faults, "None of the faults in Area IV have been classified as "active" faults by the California Geological Survey (Jennings and Bryant 2010). Active faults are those that have had movement within the last 11,700 years. Area IV and the NBZ are, however, susceptible to earthquakes due to movement along distant faults. Some slopes in the valleys in the NBZ and the north-facing slope of the hill in the southernmost part of Area IV have been identified as Earthquake-Induced Landslide Zones (California Department of Conservation 1998). This designation is based on topography, geologic materials and structure, geotechnical data, rock strength data, and estimates of earthquake-related shaking." Stability of the remediated contamination areas will be taken into consideration in the excavation and grading plans. The risk from accidents caused by earthquakes is addressed qualitatively in Chapter 4, Section 4.2.2 of the EIS. Please see Section 2.7, "Offsite Impacts," of this CRD for a discussion and DOE's response to concerns about offsite impacts, including wind-blown contamination.

1035-1

1035-1 Thank you for your comment.

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1 know, compared to many EISs, it is a very well written,
2 very logically and clearly written document, and I give
3 you credit for that.

4 Point number two: I am pleased that you
5 listened to some of the comments that you received in
6 the scoping related to the necessity and the obligation
7 to present a range of possible, feasible, practical
8 alternatives, and you put the alternatives together very
9 forthrightly, and we thank you for that.

10 And, number three, the EIS makes a nice
11 distinction between your proposed action and your
12 preferred alternative, and, as you say, your proposed
13 action is in accordance with the AOC. The preferred
14 alternative has not yet been chosen, and that will be
15 chosen, and I believe that your alternatives are
16 protective of human health.

17 And I and my organization support the
18 Conservation of Natural Resources alternative.

19 Thank you.

20 MS. LOWE: Thank you. Mark Daw. I'm going to try
21 a little better. Then Farideh Kioumehr and then Karen
22 DiBiase.

23 MR. DAUW: Hi. I'm Mark Daw. I'm a West Hills
24 resident. I've been a resident there since 1996. My
25 wife and I had two children, both born in West Hills.

1035-1
cont'd

1035-2

1035-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

1035-3

1035-3 DOE's Preferred Alternatives are identified in Chapter 2, Section 2.7 of this Final EIS. DOE's preferred alternative for soils remediation is the Conservation of Natural Resources, Open Space Scenario. DOE's preferred alternative for building demolition is the Building Removal Alternative. Under this alternative DOE would demolish the 18 DOE-owned buildings in Area IV and transport the resulting waste off site for disposal. DOE's preferred alternative for groundwater remediation is a combination of the Monitored Natural Attenuation Alternative and the Treatment Alternative.

1035-4

1035-4 DOE acknowledges your support for the Conservation of Natural Resources Alternative. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information.

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1 We live about a mile from the site over the hill.
 2 My daughter was diagnosed recently with
 3 leukemia, a rare form called APL, which the doctor said
 4 was directly related to an environmental issue. They
 5 didn't say what issue, but he said that it was an
 6 environmental issue. She was treated at Children's
 7 Hospital for the last eight months.
 8 My neighborhood has also had other cancers.
 9 We've had two children with brain cancer. We've had --
 10 an adult died from brain cancer. We've also had two
 11 other cancers within a block. So, when people say
 12 there's no direct correlation, I have to object to the
 13 --- the doctor -- the doctor, I mean -- I mean, it is
 14 related to the environment from all that our doctors
 15 told us.
 16 So, I've been coming to these since the early
 17 2000s. I never thought that my daughter or son would be
 18 affected, and I'm troubled that it's taking this long to
 19 get to where we're at, considering all the involvement
 20 of all these people who have been working very, very
 21 hard to try to get you guys to wake up, and it is just
 22 appalling. And to watch my daughter go through what she
 23 went through in the hospital, it -- it was gut
 24 wrenching.
 25 Try to reiterate: You guys have got to get

1036-1

1036-1 DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties. One of these studies, by the University of Southern California Cancer Surveillance Program, reviewed the incidence of retinoblastoma in children in Los Angeles and Ventura Counties (CSP 2007). The study authors concluded that the incidence of retinoblastoma among children under age 5 residing in the area around SSFL between 1988 and 2005 was slightly, although statistically not significantly, higher than expected based on incidence statewide. Section 3.9.5 of this EIS also presents data comparing cancer mortality and incidence rates for the United States, California, and Los Angeles and Ventura Counties.

1036-2

1036-2 DOE acknowledges your concern about cleanup of SSFL. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

1036-1 cont'd

1036-2 cont'd

Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and

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1 your act together. You're operating like a typical
2 bureaucratic government and no sense of urgency.

3 We were there when the fires burned that site,
4 and I could see the ashes coming into my yard, and they
5 looked extremely strange. They weren't typical ashes,
6 and you could see it was muddy and gooey particles
7 coming into our neighborhoods, and it was appalling.

8 And, so, I -- I went to the people who are better -- a
9 lot more knowledgeable than I am on it, that it needs to
10 be cleaned up.

11 And, my daughter was on that map that Melissa
12 presented earlier, and I think that's grossly -- the
13 gross understatement of the number of children have been
14 affected, and I'm appalled that there's never been a
15 study -- cancer study of children, and I have -- I've
16 seen the adult ones, but adults can handle what -- a lot
17 better than children or pregnant women, and my wife was
18 pregnant during -- during that time.

19 So, do your job. Thank you.

20 MS. LOWE: Okay. You can bring up the proper --

21 MS. KIOUMEHR: It's (inaudible) --

22 MS. LOWE: Sure. Then Karen DiBiase, and then
23 Kelly Holland.

24 MS. KIOUMEHR: My name is Farideh Kioumehr, if you
25 would like the spelling. And --

1036-2
cont'd

1036-3

1036-2
cont'd

1036-1
cont'd

1036-3

workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

With respect to the timeliness of DOE's completion of environmental remediation of those portions of SSFL for which it is responsible, Area IV and the NBZ, there are a number of actions that have to be completed before cleanup can begin. As discussed in Chapter 1, Section 1.3, the U.S. District Court for the Northern District of California issued an order that permanently enjoins DOE from transferring possession or otherwise relinquishing control over any portion of Area IV until DOE has completed an EIS (this EIS) and issued a Record of Decision pursuant to NEPA. Additionally, in accordance with CEQA, DTSC must also complete an environmental impact report (EIR) prior to site remediation; the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and DTSC's Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

DOE assumes that the commenter's reference is to the September 2005 Topanga fire, which affected much of the SSFL site. Chapter 3, Section 3.9.6, of this EIS, includes a summary of damage that was sustained by brush and structures at SSFL (no structures were damaged at Area IV, however) and the environmental monitoring and sampling program conducted at SSFL and surrounding areas both during and after the fire. Additional information can be obtained by searching the DOE Energy Technology Engineering Center website (<http://www.etc.energy.gov/>) for "Topanga fire."

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1 MS. LOWE: I'll show you how to spell it.
 2 MS. KIOUMEHR: And --
 3 THE REPORTER: Maybe closer to the mic.
 4 MS. LOWE: Can you get closer to the mic?
 5 MS. KIOUMEHR: I'm sure.
 6 MS. LOWE: Yeah.
 7 MS. KIOUMEHR: (Inaudible) Okay. My name is
 8 Farideh Kioumehr. Good evening. And, I'm the founder
 9 of International Health & Epidemiology Research Center.
 10 I am an epidemiologist, and our work is keeping people
 11 healthy. So, having said that, I'm also a member of the
 12 Physicians for Social Responsibility Los Angeles, and
 13 I'm here and I'm an activation defender, so this is the
 14 right place to come and talk.
 15 Our main operation -- right -- warning DOE
 16 doing what it doing, and knowing and hearing all these
 17 people, scientists from scientists, doctors, too. No
 18 more people -- we love people -- which have had the
 19 children and themselves, you know, struck with cancer
 20 and other diseases. I myself also has seen many family
 21 friends and family members which have, you know, got
 22 cancer and some other rare diseases, as one example is
 23 two husband and wife -- a husband and wife, which they
 24 were in their 50s, and they had within one year got the
 25 disease, and one of them is not even diagnosed. He

1037-1

1037-1

DOE acknowledges your preference for cleanup according to the 2010 AOC and refers you to Section 2.1, "Preferences for Cleanup," of this CRD which notes that all of the action alternatives evaluated for cleanup of Area IV and the NBZ are protective of the health and safety of the public and the environment. See also Section 2.7, "Offsite Impacts," of this CRD regarding what is known about offsite contamination and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further discussion of illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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1 didn't know what kind of disease. It was so later that
2 he couldn't really find out. And the other one -- and
3 both of them, if they were here, they could come, but
4 they are -- they lost their lives, so I'm speaking in
5 their behalf and behalf of all these people with cancer
6 caused by Santa Susana Field Laboratory in the last
7 year.

8 What I wanted to also add, that it is
9 completely clear that DOE, once you get out of the --
10 the commitment to clean up all the contamination of
11 Santa Susana Field Lab -- Laboratory, instead proposes
12 leaving between 39 to 99 percent of dangerous
13 radionuclides and toxic chemicals on site, where they
14 will continue to migrate in community -- communities and
15 trees, and this is unacceptable. DOE must abide by the
16 2010 AOC and reject all the cleanup -- and instead that
17 we're talking with partial cleaning. You should really
18 stick with the, you know, agreement that they had and
19 clean up totally, not just partially. And, if all the
20 contamination of SSFL is not cleaned up, and, you know,
21 by the agreement, people who live in that area, they're
22 going to be -- they're furthering the more increased
23 risk of, you know, getting cancer and many other
24 diseases.

25 Since we don't have time, I just want to ask

1037-1
cont'd

1037-2

1037-1
cont'd

1037-3

- 1037-2 DOE acknowledges your preference for a cleanup in accordance with the 2010 AOC. Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. As discussed in Section 2.2, the alternatives evaluated leave different quantities of soil with low concentrations of chemical and radioactive constituents on site. Based on these concentrations and on the future land use of this area as open space, these constituents are not dangerous to onsite or offsite receptors (refer to Section 2.5, "Toxicity of Soil Contaminants," of this CRD). Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. As discussed in Section 2.7, "Offsite Impacts" of this CRD, there is no evidence of major amounts of Area IV contamination leaving SSFL. The commenter is referred to EPA's soil and sediment report findings (HGL 2012b, 2012d), the results of the soil chemical investigations conducted by DOE jointly with DTSC (CDM Smith 2017), DTSC's review of the data (included as part of DTSC's broader review of sampling and characterization efforts [DTSC 2017a]), and other studies such as an off-site investigation conducted in 2007 by MWH (MWH 2007). Groundwater plumes extend from Area IV into the NBZ, but these contaminants do not extend offsite at concentrations above what is allowed under the Safe Drinking Water Act.
- 1037-3 Considering public comments on the Draft EIS is an important step in this Final EIS process. Regardless of the submission method, DOE considered all comments equally when developing this Final EIS.

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1 you, please, listen to all these people. They take time
 2 to come here and speak from their heart, and my heart is
 3 bleeding when I see the -- the kids in front a few years
 4 old --
 5 (Clock timer ringing)
 6 MS. KIOUMEHR: -- dying from cancer. So, please do
 7 the right thing.
 8 Thank you.
 9 MS. LOWE: Thank you, Ms. Kioumeh. Karen DiBiase
 10 and Kelly Holland and Sharon Ford.
 11 MS. DIBIASE: My name is Karen DiBiase. I've lived
 12 in Woodland Hills for almost 30 years, and worked in
 13 Chatsworth for about 18, very, very close to the site.
 14 I'm a member of Woodland Hills Work Center, member of
 15 the council, and I chair the Environmental Committee.
 16 In 2015, our neighborhood council took the
 17 position of a risk-based cleanup at the time -- I
 18 believe it was 2015 -- to protect the natural resources,
 19 wildlife, and neighboring communities, noticeably for
 20 the extensive transportation, the soil remediation. I
 21 will be submitting a letter based on the DOE, and we are
 22 sending that at this time. I am representing myself, my
 23 personal opinions, as our neighborhood council has not
 24 come up with their own opinion as of yet.
 25 I believe that we should remove all the

|| 1037-3
cont'd

|| 1037-1
cont'd

|| 1038-1

1038-1 DOE acknowledges your support for removal of all radionuclides from the site as well as your general support for risk-based cleanup. Please refer to Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information. The purpose of this EIS is to

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1 radionuclides from the site. We seem to be across the
2 board all your decisions. I believe we should treat
3 chemical contamination on site wherever possible. This
4 will reduce the amount of dust and reduce the impact of
5 10-years plus of truck traffic going through our
6 community, which as a default, will be increasing risk
7 to everyone else. I believe a risk-based cleanup is
8 still the best standard for the entire site. I also
9 believe there's a real risk of not locating a backfill
10 or soil to replace the amount to be removed per the AOC.
11 I believe a -- the revised look-up table, a risk-based
12 consideration of cleanup should be considered to
13 preserve what is up there now so that wildlife continue
14 to survive, protect yard cats, and the plant life. I
15 have a concern of cleaning up to a background level that
16 will not -- that will leave the site with permanent
17 scarring in order to fulfill a political agreement.
18 We need a reasonable and achievable cleanup
19 other than what the AOC seems to be doing right now.
20 With the timing, it seems to be our opportunity to
21 actually look at all the levels there and make it clean
22 but risk based for all the deals to survive.
23 Thank you.
24 MS. LOWE: Thank you. Kelly Holland will be
25 followed by Sharon Ford and then Thomas Ridge.

1038-1
cont'd

evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. Each of the action alternatives evaluated is protective of the environment and the health and safety of the public.

As discussed in Chapter 2, Section 2.3.2, of this Final EIS, one potentially effective form of onsite remediation would be to use monitored natural attenuation for management of certain low-concentration, petroleum-contaminated (TPs) soil. DOE has estimated that this onsite treatment method would reduce the amount of soil to be considered for removal at Area IV and the NBZ by about 620,000 cubic yards, with corresponding reductions in truck traffic and emissions of air pollutants. This or any other onsite treatment method would have to be approved by DTSC.

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1 MS. HOLLAND: Well -- I --

2 MS. LOWE: Put it up. Please lift it up. Thank

3 you, Dr. -- Mr. Dodge.

4 MS. HOLLAND: Actually might not help me at all.

5 My name is Kelly Holland. I live at 10945 Old Santa

6 Susana Pass Road.

7 And, I'm going to go a little off script right

8 now. I'm angry and shocked at anybody that got up here

9 and waived their hand contemptuously and said, well,

10 these are just a bunch of civilians, they're terribly --

11 they're superstitious, they're not fact based. How many

12 times have we seen this before? How many guys in grey

13 suits and women in grey suits have stood here and said,

14 oh, well, there's no problem, you need to trust us,

15 we're going up fast. That works until it doesn't work.

16 Right? It always doesn't work. Flint Michigan was

17 great. Aliso Gas Fields, great. Three Mile Island, not

18 a big deal until it is, and then it's too late, and then

19 it just becomes a bad movie with Meryl Streep in it.

20 Shame on all of you.

21 It's not that man's responsibility to prove

22 that there was a connection with his child's cancer.

23 It's your responsibility to prove that it isn't a

24 connection. It's not his -- his issue, and you haven't

25 proved it. For every health study that's been done that

1039-1

1039-1

DOE acknowledges your concern and refers you to Section 2.7, "Offsite Impacts," and Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD for further information about contamination and illnesses in the vicinity of SSFL. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

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1 says there is no connection, there's a health study that
2 says there is a connection. So, if there's even a
3 slight chance that there's a connection, you have a
4 responsibility as a government agency to listen to this
5 community and respond, not waste time. You have a
6 responsibility to do your job. (Indicating)
7 I'll go back on script now. If it wasn't so
8 tragic, I would find it hilarious this concept of
9 natural attenuation. When I hear "natural
10 attenuation," you know what I hear? Cheap, lazy,
11 irresponsible, and perhaps criminal. It's not a
12 solution.
13 When people are defrauded, we have a verb
14 that we use, we say we've been "Madoffed." When they've
15 been lied to, we have another verb we use, we say
16 they've been "trucked." I would suggest that Grace and
17 Ryan not grow up saying they've been "Jonesed" or
18 "Jenningsed," that you do your job, that you not become
19 a grey-suited character in a tragic movie about the
20 cancer causes that occurred around the meltdown, that
21 you take these people's concerns seriously and you act
22 responsibly. It's your job. Do your job.
23 MS. LOWE: Sharon Ford followed by Thomas Ridge.
24 MS. FORD: Sharon Ford. I sit on the SSFL CAG, and
25 I'm on the San Fernando Valley Audubon Environmental

1039-1
cont'd

1039-2

1039-2 Natural attenuation is used as a soil and groundwater cleanup method for low concentrations of contaminants at sites throughout the United States, including California.

1039-1
cont'd

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 Committee, but I'm here as myself, representing myself.
 2 I'm in favor of a risk-based cleanup, and in
 3 no way am I minimizing the feelings of those who have
 4 experienced losses from cancer. I understand your
 5 grief, your loss, because I lost a grandmother, my
 6 mother, my brother to cancer. My husband is a recent
 7 survivor of colon cancer and bladder cancer. So, I can
 8 understand, I can relate to how you feel.
 9 But, it is human nature to want to blame
 10 someone and blame something when there is a tragedy or a
 11 great loss. What we aren't looking at is ourselves. We
 12 want to blame DOE, we want to blame NASA, the DTSC, you
 13 name it, Boeing, all of them. Everyone of us every day
 14 does something with toxic materials for their eating, we
 15 drink up the earth, and we do not consider that it's
 16 going to affect ourselves or our children. Those
 17 bottles of water are toxic. They are made from oil
 18 products. A pregnant woman who drinks from there drinks
 19 oil toxins which goes into her baby. So, I understand
 20 the emotions of this, but we have to take a look at
 21 ourselves. It isn't just our government. And, as of
 22 now, with the change in government, the current
 23 administration is throwing out all regulations. They're
 24 trying to degrade EPA. So, we have no idea what we're
 25 up against.

1040-1

1040-1 DOE acknowledges your support for a risk-based cleanup. Please see Section 2.1, "Preferences for Cleanup," of this CRD for additional information. Please also refer to Section 2.8, "Cancer and Other Illnesses Near SSFL," of this CRD. DOE also refers you to Chapter 3, Section 3.9.5, of this Final EIS which summarizes a number of studies that have examined the potential for health effects on the public and workers related to historical activities at SSFL, as well as cancer incidence and mortality rates for the United States, California, and Ventura and Los Angeles Counties.

1040-2

1040-2 Thank you for your comment. It has been included in the Administrative Record for the EIS.

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1 The bottom line is with the AOC is if DOE and
2 NASA cannot meet their obligation, it is up to DTSC to
3 make the decision. So, while there's a blame going on
4 for the federal government agencies, we may end up with
5 a state agency handling it.
6 So, I just -- I want people to stop and think
7 about it. This is a political thing. Boxer's gone,
8 Powerleaf (ph) gone, so are the Obama administration.
9 So, who have -- who are you going to go to now?
10 A risked-based cleanup is the way we should
11 go. If -- if -- think about it. If -- cleanup to
12 background cannot bring clean soil up there. You are
13 working, living, recreating --
14 (Clock timer ringing)
15 MS. FORD: -- on contaminated soil. That's what
16 this is telling of.
17 MS. LOWE: Thank you, Ms. Ford. Thomas Ridge, and
18 then our final registered speaker is Eugene Burke.
19 MR. RIDGE: Yes, good evening. Thomas Ridge. I
20 initially wasn't going to say anything. I feel like I'm
21 probably the most uninformed person in this room. I
22 just found out about this yesterday. I've lived in the
23 area --
24 MS. LOWE: Did you say your name?
25 MR. RIDGE: Thomas Ridge.

1040-3

1040-3

DOE proposes to complete remediation of DOE's administered portions of SSFL Area IV and the NBZ in compliance with applicable requirements. Information on the selection of alternatives for cleanup of SSFL Area IV and the NBZ will be included in the Record(s) of Decision (ROD[s]) for this EIS. The ROD(s) will follow no sooner than 30-days after publication in the *Federal Register* of the EPA Notice of Availability for this Final EIS. DTSC is currently preparing a program environmental impact report (EIR) under CEQA that applies to cleanup of the entire SSFL (Areas I, II, III, and IV and the Northern and Southern Buffer Zones which includes the areas for which DOE is responsible); the *Program Environmental Impact Report for the Santa Susana Field Laboratory, Ventura County, California* (a draft of which was issued by DTSC in 2017 [DTSC 2017b]). DOE will begin final cleanup activities following completion of the following regulatory actions: (1) DTSC issues a Notice of Determination for the Program EIR identifying the selected remedial actions, (2) DOE and DTSC conform the decisions included in the DOE EIS ROD(s) and Program EIR Notice of Determination, (3) DTSC approves soils and groundwater cleanup plans prepared by the DOE in accordance with their regulatory authority provided in the AOC, and (4) DTSC approval of DOE-prepared RCRA closure plans for building demolition.

1040-1
cont'd

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1 MS. LOWE: Thank you.

2 MR. RIDGE: I've lived in the area for nearly 20

3 years, and I've never knew there was a nuclear disaster.

4 It's kind of crazy. It's a little bit surreal. So, I

5 came here to try to -- I'm a father of two. I have a

6 baby on the way in about a month, and I honestly came

7 here not knowing much, and I have been kind of walking

8 away not knowing much at all either, which is just

9 insane to me, and I feel like the woman earlier

10 mentioned a movie. I kind of feel -- have you guys ever

11 seen that movie "Armageddon"? Right? They're at the

12 end and they're trying to turn the space shuttle, like a

13 bomb is going to go off, and Bruce Willis and the other

14 guy are arguing, and there's the one guy that's like,

15 "Well, just -- just turn it off, you know." I feel kind

16 of like that guy. I'm just, "What the hell is going on

17 right now?" And, you know, I try to use my -- I own

18 several businesses, both overseas and domestically, and

19 I try to use experience, guide it with common sense, and

20 I -- I don't have a lot of experience with what everyone

21 else is talking about, so I'll just try to rely on my

22 common sense.

23 But there was some type of event that

24 occurred. Obviously, everyone agrees things are

25 contaminated to some degree. I -- I just think we

1041-1

1041-1

Chapter 3, Sections 3.9.5 and 3.9.6, of this Final EIS provide information about accidents at Area IV, including the 1959 SRE accident, which was the only accident that caused a measureable release of radioactive material. Section 3.9.6 explains that at the time of the accident it was estimated that the accident resulted in the release over a 2-month period) of about 28 curies of radioactive noble gases such as krypton-85, in low, controlled concentrations that met Federal requirements. The release was estimated to result in a maximum radiation dose at the location of the nearest resident of 0.018 millirem. Using current risk factors, this dose would have resulted in a risk of a fatal cancer to an exposed individual of 1×10^{-8} (one chance in about 93 million). A 1999 study by ATSDR estimated a maximum dose to a potentially exposed individual of 0.005 millirem with an even smaller risk of a fatal cancer.

Because of public concern about the SRE accident, DOE hosted an informational workshop on August 29, 2009, with testimony from three independent experts (see http://www.etec.energy.gov/Community_Involvement/Public%20Meetings/SRE_Workshop.html). Two of these experts supported the estimate made at the time of the accident. They stated that releases at the time of the accident should have primarily involved noble gases, with only small releases of volatile fissions products such as iodine and cesium isotopes. One of the experts was skeptical of the estimates of large health effects being experienced by individuals and the population. The third expert concluded that available information was inadequate to resolve the fraction of the noble gases and fission products that may have been released. This expert did not quantify public risks from the accident but thought that the risk to the maximally exposed individual was smaller than the risk of cancer from other causes, but that the collective exposure could have resulted in some cancers in the population.

DOE and its contractors assigned unique identification numbers to 272 structures in Area IV that were used during its operational period (Sapere 2005). As discussed in Chapter 1, Section 1.3, of this EIS, most of these structures have been removed during prior cleanup activities. Much of the chemical and radioactive material in soil and buildings was cleaned up to the standards established at the time the cleanup was performed (i.e., 1980s and 1990s). Today the major structures remaining in Area IV are 22 buildings (18 owned by DOE and 4 owned by Boeing). Please also refer to

1041-1 cont'd

1041-2

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1 should clean it up, just -- I -- I don't know if I'm
2 being too simple, and I apologize if I am, but let's
3 just clean it up, and let's worry about the natural
4 settings later after it's cleaned up. And, you know,
5 it's got to be good, and I don't have to worry about my
6 kids and thinking, you know, should I move out of the
7 area. Because I have no freaking clue what's going on
8 here for 20 years and have no idea there was a nuclear
9 incident.

10 I'm not an uninformed person, which is crazy,
11 because I literally had to like -- basically my wife and
12 I were talking about Fukushima, because it came up in
13 the news, and I ran in my -- right -- we were talking,
14 "Hey, what would be the worst accident here in the
15 United States?" And, I was thinking Three Mile Island.
16 We literally Googled it yesterday, and freaking Simi
17 Valley came up. What? This is a joke; right? I mean,
18 that's -- and I'm a pretty informed person. I just
19 didn't know to look in my own back yard. And, I'll be
20 honest with you, with Fukushima out there, my wife and I
21 were kind of talking about, "Hey, you know, that
22 radiation could come over here." We were having a
23 serious discussion about that. And, I'm five miles from
24 this thing.

25 So, anyway, I know I don't have a lot of time.

1040-2
cont'd

1041-1
cont'd

Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD for more information about the current state of facilities and contamination in SSFL Area IV and the NBZ.

1041-2 Much cleanup has previously been performed. As stated in the response to comment 1041-1 DOE has removed most of the buildings in Area IV. DOE has also removed much of the contamination within the soil and remaining buildings that resulted from nuclear research activities. (Please see Section 2.10, "Public Perceptions about Waste and Contamination in Area IV," of this CRD.) The purpose of this EIS is to evaluate alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. All of the action alternatives would be protective of the health and safety of the public and the environment.

Please see Section 2.1, "Preferences for Cleanup," and Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD for additional information, including information on the steps necessary prior to DOE continuing cleanup of Area IV and the NBZ.

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1 I'd just like you guys to know it must be enormously
 2 tough sitting here. I -- I go around the country doing
 3 this, so I'm not -- I'm not crazy. I'm just trying to
 4 use common sense.

5 Let's do some cleaning this up as best we can
 6 so that there's no mess left, and then we'll worry about
 7 all the -- the other environmental habitat things later,
 8 just common sense.

9 MS. LOWE: Thank you. Eugene Burke.

10 MR. BURKE: Eugene Burke. Glad to be here. I came
 11 here tonight to really listen to see what was going on
 12 here. I didn't come with a prepared speech. But, I --
 13 I appreciate the opportunity to share in this, and I
 14 want to thank DOE for providing this public forum, and I
 15 do hope maybe you consider doing this again. Maybe we
 16 could have even brain-storm sessions. Couple of
 17 thoughts come to mind. Before I come to that point,
 18 though, I'm a man living here. I've got a number of
 19 dots I'm trying to connect. I'm a retired environmental
 20 investigator, 11 years, licensed, very much involved.
 21 Oh, mainly indoor environmentals. Okay? Certainly not
 22 a expert of any kind on radiation problems. Three years
 23 of chemistry, all of the three college units that I
 24 built up, it really didn't help me one tiny bit when it
 25 comes to radiation and radiation waste. What to do with

1041-2
cont'd

1042-1

1042-1 Thank you for your comment; DOE appreciates your desire to get involved in the public outreach for this Final EIS. Any additional public involvement opportunities will be advertised by DOE through its email contact list and on the Energy Technology Engineering Center website (<http://www.etc.energy.gov>). To be added to the email contact list please contact DOE at debbie.kramer@emcbc.doe.gov.

1042-2

1042-2 A statement was added to Chapter 4, Section 4.10, of this Final EIS that all wastes generated under the activities evaluated in this EIS will be managed in accordance with State and Federal regulations that are applicable to each type of waste. All wastes generated under the alternatives evaluated in this EIS will be disposed of or recycled at

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 it now? So, I think that we don't know. And, I think
2 the DOE -- I sympathize with the DOE, you know. Hey,
3 what are we going to do with this stuff?
4 I'm going to say another thing. I don't hear
5 anybody -- I've got a, by the way, home in here since
6 1970, couple of homes, and right now I've been living on
7 an Area I, very short distance from the Rocketdyne
8 facility. Okay? My wife died of cancer about seven
9 years ago, and I'm no fan of radiation therapy, by the
10 way, or cancer either, so don't let me get started
11 there. So, I want to say, that for the Valley, I just
12 want to call attention to that, to remove, how to remove
13 the stuff, too, that's a -- that's a big question, and
14 when to remove it. We don't -- I would say we don't
15 want to be removing the kind of waste, the contamination
16 we have during the summertime in the Valley with all of
17 the building, the lands that are going on. My goodness,
18 we don't want to do that.
19 The other thing is, the -- the -- you look --
20 we've got to go for the whole -- we -- we can't sit back
21 and just say, "Oh." There's no proof of safety, by the
22 way. You want to -- somebody else brought up a good
23 point. Where's the proof of safety --
24 (Clock timer ringing)
25 MR. BURKE: -- for not removing all of the stuff?

1042-2
cont'd

1042-3

1042-4

offsite facilities. Chapter 3, Section 3.10, of this EIS identifies representative radioactive and nonradioactive waste disposal or recycle facilities that may be used to manage the different types of wastes that would be generated under each of the EIS alternatives. The environmental impacts that could occur from transport of the wastes to these facilities and the subsequent management of the wastes at these facilities are addressed primarily in Chapter 4, Sections 4.8, 4.10, 4.13, and 4.14 of this EIS.

1042-3 To complete timely removal of the buildings and the large volume of soil projected for cleanup of Area IV and the NBZ, DOE plans to transport soil the year round, within the limitations of Mitigation Measure SW-1 which restricts the excavation of soils to bedrock and backfill in drainage areas leading offsite to avoid any increases in runoff volume during periods of high rainfall. Transportation activities would be suspended only if there were a health and safety reason for doing so.

1042-4 This EIS evaluates alternatives for completing remediation of those portions of SSFL for which DOE is responsible, Area IV and the NBZ. It evaluates a soil remediation alternative that incorporates the technical elements of the 2010 AOC using the AOC LUT values as the basis for a cleanup to background levels or levels based on laboratory capabilities, as well as alternatives that consider risk to human health and protection of natural resources to determine cleanup levels (refer to Section 2.2, "Compliance with the 2010 Administrative Order on Consent," of this CRD). The use of a risk assessment approach for soil cleanup is consistent with that used for cleanup actions by DOE at sites throughout the United States, by DTSC at other DTSC-regulated sites, and by EPA at CERCLA sites. Each of the action alternatives evaluated is protective of the health and safety of the public and the environment. Refer to Chapter 4, Section 4.9 of this Final EIS for information about potential impacts on the public under the different alternatives.

Section 3 - Public Comments and DOE Responses

Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1 And, there's certainly -- and it certainly isn't helpful
 2 right now -- is time up?
 3 MS. LOWE: Yeah, it is.
 4 MR. BURKE: Okay. I'll start a close. But I --
 5 let's do this again, please. I look forward to it. By
 6 the way, I'll volunteer, no -- no charge to -- to -- if
 7 you get involved with the how part, I -- I could go on
 8 for an hour on that.
 9 MS. LOWE: Thank you.
 10 MR. BURKE: Keep my name around. I would really
 11 be -- be glad to chip on it.
 12 MS. LOWE: Okay. I would like to recall two people
 13 that registered but did not respond when I called their
 14 names. Kim Wong and Rick McFadden. Okay. I believe
 15 that's all the people that are registered to speak.
 16 On behalf of the U.S. Department of Energy, I
 17 want to thank you very much for your time and attention.
 18 Let the record reflect that it is now 9:17 p.m. and all
 19 registered speakers have been called upon to speak. The
 20 project team looks forward to working with you
 21 throughout this process. We will now adjourn this
 22 meeting. Thank you so much for coming tonight.
 23 (Whereupon, the Public Hearing was
 24 adjourned at 9:17 p.m.)
 25 REPORTER'S CERTIFICATION

1042-1
cont'd

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Comments from the Van Nuys, California Public Hearing (February 21, 2017)

1
2 I, PHILLIP DEAN ORR, C.S.R. No. 7656, Certified
3 Shorthand Reporter, certify:
4 That the foregoing proceedings were taken
5 before me at the time and place therein set forth.
6 That the proceedings were recorded stenographically
7 by me and were thereafter transcribed;
8 That the foregoing is a true and correct transcript
9 of my shorthand notes so taken.
10 I further certify that I am not a relative or
11 employee of any attorney or of any of the parties, nor
12 financially interested in the action.
13 I declare under the penalty of perjury under
14 the laws of the State of California that the
15 foregoing is true and correct.
16 Dated this 28nd day of February, 2017.
17
18
19 -----
20 PHILLIP DEAN ORR, C.S.R. No. 7656
21
22
23
24
25

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SECTION 4

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