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DOE/EIS-0236-S3

# **Final Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement**

**March 2005**

**Volume IV  
Comment Response Document**

**Prepared by:**



## COVER SHEET

**RESPONSIBLE AGENCY:** U.S. Department of Energy (DOE) National Nuclear Security Administration

**TITLE:** Final Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (DOE/EIS-0348 and DOE/EIS-0236-S3)

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**Abstract:** The National Nuclear Security Administration (NNSA), a separately organized agency within DOE, has the responsibility to maintain and enhance the safety, reliability, and performance of the U.S. nuclear weapons stockpile to meet national security requirements. NNSA manages DOE's nuclear weapons programs and facilities, including those at Lawrence Livermore National Laboratory (LLNL). The continued operation of LLNL is critical to NNSA's Stockpile Stewardship Program and to preventing the spread and use of nuclear weapons worldwide. LLNL maintains core competencies in activities associated with research and development, design, and surveillance of nuclear weapons, as well as the assessment and certification of their safety and reliability.

This *Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement* (LLNL SW/SPEIS) prepared pursuant to NEPA, analyzes the potential environmental impacts of continued operation, including near term proposed projects of LLNL. Alternatives analyzed in this LLNL SW/SPEIS include the No Action Alternative, the Proposed Action, and the Reduced Operation Alternative. This document is also a Supplement to the *Final Programmatic Environmental Impact Statement for Stockpile Stewardship and Management* for use of proposed materials at the National Ignition Facility (NIF). This combination ensures timely analysis of the reasonably foreseeable environmental impact of NIF experiments using the proposed materials concurrent with the environmental analyses being conducted for the site-wide activities and will be referred to as the LLNL SW/SPEIS.

This document assesses the environmental impacts of LLNL operations on land uses and applicable plans, socioeconomic characteristics and environmental justice, community services, prehistoric and historic cultural resources, aesthetics and scenic resources, geology and soils, biological resources, water, noise, traffic and transportation, utilities and energy, materials and waste management, human health and safety, site contamination, and accidents. For this Final LLNL SW/SPEIS the Proposed Action has been identified as the preferred alternative for the continuing operations of LLNL.

**Public Comments:** The Draft LLNL SW/SPEIS was issued for public review and comment on February 27, 2004. The public comment period was held from February 27, 2004 to May 27, 2004. Public meetings to solicit comments on the Draft LLNL SW/SPEIS were held in Livermore, California; Tracy, California; and Washington, D.C. All comments were considered during the preparation of the Final LLNL SW/SPEIS, which also incorporates additional and new information received since the issuance of the Draft LLNL SW/SPEIS. In response to comments on the Draft LLNL SW/SPEIS, the Final LLNL SW/SPEIS contains revisions and new information. These revisions and new information are indicated by a sidebar in the margin. Volume IV contains the comments received during the public comment period on the Draft LLNL SW/SPEIS and NNSA's responses to these comments. NNSA will use the analyses presented in this Final LLNL SW/SPEIS as well as other information in preparing the Record of Decision (ROD). NNSA will issue this ROD no sooner than 30 days after the U.S. Environmental Protection Agency publishes a notice of availability of this Final LLNL SW/SPEIS in the *Federal Register*.

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**ABBREVIATIONS AND ACRONYMS**

ALARA	As low as reasonably achievable
AMP	Advanced Materials Program
AVLIS	Advanced Vapor Laser Isotope Separation
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BBRP	Biology and Biotechnology Research Program
BMP	Best management practice
BSL	BioSafety Level
CEQ	Council on Environmental Quality
CEQA	<i>California Environmental Quality Act of 1970</i>
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CFF	Contained Firing Facility
CFR	<i>Code of Federal Regulations</i>
D&D	Decontamination and decommissioning
dB	Decibel
dB(A)	A-weighted decibel
DNA	Deoxyribonucleic acid
DNFSB	Defense Nuclear Facility Safety Board
DOE	United States Department of Energy
DOI	United States Department of Interior
DOT	United States Department of Transportation
DP	Office of Defense Programs
DTSC	Department of Toxic Substances Control
DWTF	Decontamination and Waste Treatment Facility
EA	Environmental Assessment
EIR	Environmental impact report
EIS	Environmental impact statement
EMPC	Energetic Material Processing Center
EO	Executive Order
EOC	Emergency Operations Center

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EPA	United States Environmental Protection Agency
EPCRA	<i>Emergency Planning and Community Right-to-Know Act of 1986</i>
EPD	Environmental Protection Department
ERPG	Emergency response planning guideline
ES&H	Environment, Safety, and Health
FOIA	<i>Freedom of Information Act</i>
FONSI	Finding of no significant impact
FR	<i>Federal Register</i>
Freon-11	Trichlorofluoromethane
Freon-113	Trichlorotrifluoroethane
FY	Fiscal year
HEDC	High Explosives Development Center
HEPA	High-efficiency particulate air (filter)
HEU	Highly enriched uranium
HPAC	Hazard Prediction and Assessment Capability
HVAC	Heating, ventilation, and air conditioning
ISCCS	Interagency Committee on Seismic Safety in Construction
ITP	Integrated Technology Project
LANL	Los Alamos National Laboratory
LBNL	Lawrence Berkeley National Laboratory
LCF	Latent cancer fatality
LLNL	Lawrence Livermore National Laboratory
LLW	Low-level waste
MACCS2	MELCOR Accident Consequence Code System, Version 2
MAR	Material at Risk
MEI	Maximally exposed individual
MLLW	Mixed low-level waste
MM	Modified Mercalli
NAAQS	National Ambient Air Quality Standards
NEPA	<i>National Environmental Policy Act</i>
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHPA	<i>National Historic Preservation Act</i>

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NIF	National Ignition Facility
NNSA	National Nuclear Security Administration
NOI	Notice of intent
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPT	Nuclear Proliferation Treaty
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
NTS	Nevada Test Site
ORAD	Operations & Regulatory Affairs Division
OSHA	Occupational Safety and Health Administration
PC	Personal computer
PEIS	Programmatic Environmental Impact Statement
PM <sub>10</sub>	Particulate matter less than 10 microns in diameter
PM <sub>2.5</sub>	Particulate matter less than 2.5 microns in diameter
R&D	Research and Development
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
rem	Radiation equivalent-man
RF	Respirable fraction
ROD	Record of Decision
ROI	Region of influence
SAR	Safety analysis report
SARA	<i>Superfund Amendments and Reauthorization Act of 1986</i>
SEIS	Supplemental Environmental Impact Statement
SHARP	Super High Altitude Research Project
SHPO	State Historic Preservation Officer
SJVEC	San Joaquin Valley Energy Center
SNL/CA	Sandia National Laboratories/California
SNM	Special nuclear material
SPCC	Spill Prevention Control and Countermeasure
SSM PEIS	Stockpile Stewardship and Management PEIS
SSP	Stockpile Stewardship Program

SWEIS	Site-wide Environmental Impact Statement
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TRAC	The RadioActivist Campaign
TRU	Transuranic
TRUPACT-II	Transuranic Package Transporter-II
USC	<i>United States Code</i>
USFWS	United States Fish and Wildlife Service
WIPP	Waste Isolation Pilot Plant
Zone 7	Alameda County Flood Control and Conservation District, Zone 7

**UNIT OF MEASURE AND ABBREVIATIONS**

acre	ac
billion gallons per year	BGY
centimeters	cm
cubic feet	ft <sup>3</sup>
cubic feet per second	ft <sup>3</sup> /s
cubic meters	m <sup>3</sup>
cubic yards	yd <sup>3</sup>
Curie	Ci
decibel	dB
degrees Celsius	°C
degrees Fahrenheit	°F
feet	ft
gallon	gal
gallons per day	gpd
gram	g
grams per second	g/sec
gravity	<i>g</i>
hectare	ha
Hertz	Hz
hour	hr
kelvin	K
kilogram	kg
kilojoule	kJ
kilometer	km
kilometer per hour	km/hr
kilovolt	kV
kilovoltampere	kVA
kilowatt	kW
kilowatt hour	kWh
liter	L

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megajoule	MJ
megavolt-ampere	MVA
megawatt	MW
megawatt hour	MWh
megawatt-electric	MWe
megawatt-thermal	MWt
meter	m
meters per second	m/sec
microcurie	$\mu\text{Ci}$
microcuries per gram	$\mu\text{Ci/g}$
microgram	$\mu\text{g}$
micrograms per cubic meter	$\mu\text{g/m}^3$
micrograms per kilogram	$\mu\text{g/kg}$
micrograms per liter	$\mu\text{g/L}$
micron or micrometer	$\mu\text{m}$
microohms per centimeter	$\mu\text{ohms/cm}$
micropascal	mPa
mile	mi
miles per hour	mph
millicurie	mCi
millicurie per gram	mCi/g
millicurie per millimeter	mCi/ml
milligram	mg
milligram per liter	mg/L
milliliter	ml
millimeters of mercury	mmHg
million	M
million electron volts	MeV
million gallons per day	MGD
million gallons per year	MGY
millirem	mrem
millirem per year	mrem/yr

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nanocurie	nCi
nanocuries per gram	nCi/g
part per billion	ppb
part per billion by volume	ppbv
part per million	ppm
particulate matter of aerodynamic diameter less than 10 micrometers	PM <sub>10</sub>
particulate matter of aerodynamic diameter less than 25 micrometers	PM <sub>25</sub>
pascal	Pa
picocurie	pCi
picocuries per gram	pCi/g
picocuries per liter	pCi/L
pound	lb
pounds mass	lbm
pounds per square inch	psi
pounds per year	lb/yr
quart	qt
Roentgen equivalent, man	rem <sup>a</sup>
second	sec
square feet	ft <sup>2</sup>
square kilometers	km <sup>2</sup>
square meters	m <sup>2</sup>

## CONVERSION CHART

TO CONVERT FROM U.S. CUSTOMARY INTO METRIC			TO CONVERT FROM METRIC INTO U.S. CUSTOMARY		
If you know	Multiply by	To get	If you know	Multiply by	To get
<b>Length</b>					
inches	2.540	centimeters	centimeters	0.3937	inches
feet	30.48	centimeters	centimeters	0.03281	feet
feet	0.3048	meters	meters	3.281	feet
yards	0.9144	meters	meters	1.094	yards
miles	1.609	kilometers	kilometers	0.6214	miles
<b>Area</b>					
square inches	6.452	square centimeters	square centimeters	0.1550	square inches
square feet	0.09290	square meters	square meters	10.76	square feet
square yards	0.8361	square meters	square meters	1.196	square yards
acres	0.4047	hectares	hectares	2.471	acres
square miles	2.590	square kilometers	square kilometers	0.3861	square miles
<b>Volume</b>					
fluid ounces	29.57	milliliters	milliliters	0.03381	fluid ounces
gallons	3.785	liters	liters	0.2642	gallons
cubic feet	0.02832	cubic meters	cubic meters	35.31	cubic feet
cubic yards	0.7646	cubic meters	cubic meters	1.308	cubic yards
<b>Weight</b>					
ounces	28.35	grams	grams	0.03527	ounces
pounds	0.4536	kilograms	kilograms	2.205	pounds
short tons	0.9072	metric tons	metric tons	1.102	short tons
<b>Temperature</b>					
Fahrenheit (°F)	subtract 32, then multiply by 5/9	Celsius (°C)	Celsius (°C)	multiply by 9/5, then add 32	Fahrenheit (°F)
Kelvin (K)	subtract 273.15	Celsius (°C)	Celsius (°C)	add 273.15	Kelvin (K)

*Note: 1 sievert = 100 rems*

## CHAPTER 1: PUBLIC COMMENT PROCESS

This chapter of the Comment Response Document describes the public comment process for the *Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement* (Draft LLNL SW/SPEIS) and the procedure used in responding to those comments. Section 1.1 describes the means through which comments were acquired, summarized, and numbered. Section 1.2 discusses the public hearing format that was used to solicit comments from the public. Section 1.3 describes the organization of this document as well as how the comments were categorized, addressed, and documented. Sections 1.3 and 1.4 also provide guidance on the use of this document to assist the reader. The chapter concludes with a discussion of the major comments and changes to the Draft LLNL SW/SPEIS resulting from the public comment process.

### 1.1 INTRODUCTION

In February 2004, the U.S. Department of Energy (DOE) published the Draft LLNL SW/SPEIS, which analyzes the potential environmental impacts associated with continuing current Lawrence Livermore National Laboratory (LLNL) operations and foreseeable new and/or modified operations and facilities. The Draft LLNL SW/SPEIS analyzed a Proposed Action and two alternatives; the No Action Alternative and a Reduced Operation Alternative. The No Action Alternative would continue operation of current LLNL programs in support of currently assigned missions. The Proposed Action includes operations discussed under the No Action Alternative plus new and/or expanded LLNL operations in support of reasonably foreseeable future mission requirements. The Reduced Operation Alternative includes an overall reduction of LLNL activities below the No Action Alternative level. The 90-day public comment period for the Draft LLNL SW/SPEIS began on February 27, 2004 and ended on May 27, 2004. Late comments were considered up to two weeks after the close of the public comment period and were specifically listed in the Comment Response Document. Comments received more than 2 weeks late were also considered, although were not specifically listed in this Comment Response Document.

During the comment period, public hearings were held in Livermore, CA; Tracy, CA; and Washington, DC. Figure 1.1–1 shows the locations and dates of the hearings. In addition, the public was encouraged to provide comments via mail, fax, or e-mail.



**FIGURE 1.1–1.—Public Hearing Locations and Dates**

Attendance at each hearing, together with the number of comments recorded, is presented in Table 1.1–1. Attendance numbers are based on the number of participants who completed and returned registration forms and may not include all of those present at the hearings. In addition to comments received at the public hearings, comments were also received during the public comment period through the other means described above.

**TABLE 1.1–1.—Public Hearing Locations, Attendance, and Comment Summaries**

Hearing Location	Total Attendance	Comments
Livermore, CA (Afternoon session)	106	61
Livermore, CA (Evening session)	86	82
Tracy, CA (Afternoon session)	25	68
Tracy, CA (Evening session)	25	36
Washington, DC	25	39

All public hearing comments were included with comments received by other means during the public comment period. Comments received by mail and fax were date stamped. Comments received by e-mail have the date automatically included. Chapter 2 of this volume contains copies of the documents DOE received. Table 1.1–2 provides an overview of the number of documents and comments submitted by each method.

**TABLE 1.1–2.—Document and Comment Submission Overview**

Method	Documents Received	Total Comments Received
Hand-in at public hearings	26	94
Mail-in	161	701
Letter/postcard campaigns	1,534	7,765
Fax	22	60
E-mails	56	152
Transcripts	6	371

## 1.2 PUBLIC HEARING FORMAT

The public hearings were conducted using a traditional hearing format. A neutral facilitator was present at each hearing to direct and clarify discussions and comments. Court reporters were also present to provide a verbatim transcript of the proceedings and record all formal comments that the public wished to present.

The format used for each hearing included presentations on the LLNL mission, a summary of the LLNL SW/SPEIS, and a discussion of the *National Environmental Policy Act* (NEPA) process. The presentations were followed by a period of clarifying questions by the public. The hearing concluded with a comment period for attendees.

After the clarifying questions were addressed, the facilitator opened the hearing for any attendee who wished to make a comment. Attendees who wished to speak at the hearing were required to sign up on a speakers' list before the hearing began. Federal- and state-wide elected representatives attending the hearings were afforded priority to speak. Locally-elected officials were alternated with other attendees who spoke on a "first come" basis according to their order on the speakers' list.

## 1.3 ORGANIZATION OF THIS COMMENT RESPONSE DOCUMENT

This Comment Response Document has been organized into the following sections:

- Chapter 1 describes the public comment process and contains tables to assist readers.
- Chapter 2 contains scanned copies of comment documents received during the public comment period including scans of the public hearing transcripts.
- Chapter 3 contains comment summaries and DOE responses by category.

Tables are provided at the end of this chapter to assist commentators and other readers in locating individual comments regarding the LLNL SW/SPEIS. Once comments were received, they were categorized by issue (e.g., land use, air quality, etc.) and assigned a category code. Table 1.3–1 lists the issue categories and corresponding category codes. Similar comments within the same issue category were then summarized and assigned a summary code.

Table 1.3–2 identifies the individuals who attended public hearings and the pages where comments from those hearings appear. Table 1.3–3 identifies the individuals who presented comments at the hearings. Commentors interested in locating their comment document and reviewing how it was coded can use Tables 1.3–4 and 1.3–5. Table 1.3–4 consists of a list of members of the general public who submitted comments. Commentors are listed by last name and the pages on which their comment documents appear. Table 1.3–5 consists of a list of state and local officials and agencies, companies, organizations, and special interest groups that submitted comments. The commentors in Table 1.3–5 are listed by organization in alphabetical

order with the names of the particular individuals who submitted those documents. For each commentator, the pages on which their comment documents appear are listed.

Some commentators submitted documents which were classified as “letter or postcard campaigns.” These campaigns were conducted by various organizations and special interest groups to express either support or opposition to aspects of the LLNL SW/SPEIS. Although many duplicate documents were received from each campaign, only one document scan of each type is included in Chapter 2. Table 1.3–6, Table 1.3–7, and Table 1.3–8, identify the individuals who submitted documents as part of the three letter campaigns and the page numbers where the scans of the letters can be found. Table 1.3–9 identifies the individuals who submitted documents as part of the postcard campaign and the page number where the scan of the postcards can be found. Four multiple signatory documents were received, (a document was considered a multiple signatory document if it was signed by more than two individuals). Table 1.3–10 identifies the individuals who submitted multiple signatory documents and the page number where the scan of the multiple signatory documents can be found.

Table 1.3–11 is organized by summary code. Using the appropriate summary code, commentators can locate all of the comments that are reflected in each summary. The table also lists the page on which the comment summary and corresponding response appear and the pages on which the actual comment documents appear. Some comment documents presented in Chapter 2 consist of multiple pages. The document page number given in Tables 1.3–2 through 1.3–10 refers to the first page on which the comment document appears. The document page number given in Table 1.3–11 refers to the page on which the individual comment begins within the commentator’s document.

#### **1.4 HOW TO USE THIS COMMENT RESPONSE DOCUMENT**

Begin by locating the commentator’s name in Tables 1.3–3, 1.3–4, or 1.3–5 as appropriate. These tables list the page number on which that commentator’s document appears in Chapter 2. To see what issue codes were assigned to the comments identified within a document, locate the document in Chapter 2. Chapter 2 contains scans of the document with sidebars identifying the issue code assigned to each comment and the summary code. Chapter 3 contains comment summary and responses to the comments identified in Chapter 2.

For example, if Ms. Betty Heffernan wanted to track her comments, she would go to Table 1.3–4 to find her name, and the corresponding page on which her document appears in Chapter 2 (page 2-157). On page 2-157, Ms. Heffernan would find that her scanned document has been side-barred and coded 02.01 for the first comment and 03.01 for the second comment. After obtaining the issue code from the scanned document, Ms. Heffernan could go to Chapter 3 to locate the summary codes that were assigned to the identified comments and read the responses. For example, the first comment was assigned summary code 02.01. She would then go to Chapter 3 and find the response to summary code 02.01 on page 3-4. The second comment was assigned summary code 03.01. She would go to Chapter 3 and find the response to summary code 03.01 on page 3-6. Ms. Heffernan could use Table 1.3–11 to see how her comments were categorized, and locate the page numbers on which other comments that express similar concerns appear in Chapter 2.

## 1.5 MAJOR COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD ON THE DRAFT LLNL SW/SPEIS

Approximately 9,000 comments (including approximately 7,770 comments as part of 4 letter and postcard campaigns) were received from individuals, interested groups, Native Americans, and Federal, state, and local agencies during the public comment period on the Draft LLNL SW/SPEIS, including approximately 286 comments made during the five public hearings. The majority of comments focused on policy issues related to the mission and need for LLNL. The major comments included the following:

- Many commentors were opposed to conducting nuclear weapons research and development activities at LLNL. Reasons stated for this opposition included:
  - Is not in compliance with Article VI of the Nuclear Nonproliferation Treaty
  - Promotes a nuclear arms race
  - Involves the use or increased use of radioactive and toxic materials (e.g., BSL-3) which are a health risk to the public
  - Concerns about preservation of the local environment and endangered species
  - Leads to development of new weapons designs
  - Redundant with other DOE laboratory activities
- Many commentors requested that a nonproliferation and treaty compliance review be conducted for the activities covered in the LLNL SW/SPEIS, including the National Ignition Facility (NIF) and the Integrated Technology Project (ITP).
- Many commentors stated that the United States should reduce the current size of the stockpile.
- Many commentors expressed the opinion that spending money on nuclear weapons and LLNL would be a waste of taxpayers' money. Many commentors advocated spending this money on education, health care, environmental cleanup, renewable sources of energy, and other social programs.
- Some commentors questioned why the LLNL SW/SPEIS did not provide a “true” No Action Alternative. These commentors stated that many projects that are not yet built are improperly considered within the No Action Alternative.
- Many commentors expressed concerns regarding contamination and mitigation measures to prevent or minimize additional contamination at LLNL.
- Several commentors expressed concern regarding terrorist attacks and security at LLNL. These commentors requested that information regarding terrorist attacks and security be made public.
- Many commentors expressed concern and opposition regarding plans to use plutonium, highly enriched uranium, and lithium hydride in experiments in the NIF. Concerns centered on the potential for increasing the usefulness of the NIF for nuclear weapons development, including the design of new nuclear weapons. There were also concerns over the hazards to workers and the environment from these experiments.

- Several commentors stated that the ITP is not needed.
- Many commentors expressed opposition to increasing the administrative limit for plutonium at LLNL.
- Many commentors expressed concern and opposition regarding the manufacture of tritium targets for the NIF, stating that this would increase the amount of airborne radioactivity emanating from LLNL. There was also concern that the tritium used in the Tritium Facility would increase from the current limit of just over 3 grams to 30 grams.
- Many commentors questioned the need for the BSL-3 Facility and opposed siting this facility at LLNL.

## 1.6 MAJOR CHANGES FROM THE DRAFT LLNL SW/SPEIS

In response to comments received on the Draft LLNL SW/SPEIS, and to include technical information not available at the time of issuance, DOE made changes to the Draft LLNL SW/SPEIS. The Summary and Volumes I, II, and III of the Final LLNL SW/SPEIS contain changes, which are indicated by a sidebar in the margin. A brief discussion of the more significant changes is provided below.

- In the Draft LLNL SW/SPEIS NNSA proposed implementing atomic vapor laser isotope separation technology for the Advanced Materials Program (AMP) and the ITP to provide isotopes for Stockpile Stewardship Program experiments. NNSA has reconsidered its material requirements and determined that it has a sufficient inventory for the planned experiments. Therefore, NNSA has not identified a reasonably foreseeable need to pursue either the AMP or ITP. Therefore, the AMP has been removed from the No Action Alternative and ITP has been removed from the Proposed Action. As a result of this, there were several changes to the environmental impact analysis, which are discussed as follows:
  - Removing the ITP from the Proposed Action reduces the proposed increase in the administrative limit for storing plutonium in the Superblock. It was estimated that up to 100 kilograms of plutonium would be stored in the Plutonium Facility. Consequently, the proposed increase above the current 700 kilogram limit has been reduced from 1,500 kilograms to 1,400 kilograms of plutonium.
  - Removing the ITP from the Proposed Action reduces the proposed increase in the material-at-risk limit for the Plutonium Facility from the 60 kilograms that was analyzed in the Draft LLNL SW/SPEIS. Without the ITP, the Proposed Action would increase the plutonium material-at-risk limit from 20 to 40 kilograms of fuel-grade equivalent plutonium in each of two rooms of the Plutonium Facility. The material-at-risk limit for all other rooms would remain 20 kilograms fuel-grade equivalent plutonium. This increase is needed to meet future Stockpile Stewardship Programs such as the casting of plutonium parts. These activities support campaigns for advanced radiography, pit manufacturing and certification programs. This revised material-at-risk increase reduces the bounding accident consequences of the Proposed Action. Based on this proposed material-at-risk increase, the bounding Plutonium Facility accident consequences to the population surrounding LLNL would be an unfiltered fire involving 40 kilograms fuel-grade equivalent plutonium

resulting in  $1.12 \times 10^{-1}$  latent cancer fatality (LCFs) per year under the Proposed Action. This is double that of the No Action Alternative and a 33 percent reduction compared to the impacts that were presented in the Draft LLNL SW/SPEIS (i.e.,  $1.68 \times 10^{-1}$  LCFs per year) for the Proposed Action.

- Without the ITP, there would be less of an increase in radiological wastes compared to the No Action Alternative. The waste management sections of the SW/SPEIS have been updated to reflect these new waste generation volumes. This in turn would result in less radiological waste transportation than was analyzed in the Draft LLNL SW/SPEIS. As a result, Appendix J has been revised to analyze the new transportation impacts.
- Without the ITP, the worker dose for the Proposed Action would be 93 person-rem instead of 125 person-rem as reflected in the Draft LLNL SW/SPEIS. The No Action Alternative worker dose would be 89 person-rem. The dose to the population and the maximally exposed individual (MEI) was virtually unaffected because the predominant impacts from ITP would have been direct radiation to involved workers, as opposed to radiological emissions.
- The removal of ITP from the Proposed Action had an insignificant effect on other resources, such as land use, electricity, traffic, and socioeconomics. Consequently, these sections of the SW/SPEIS were not changed. Similarly, the AMP contributed such a small fraction to impacts associated with the No Action Alternative; therefore, the removal of AMP had an insignificant effect on the No Action impact assessment.
- Projected air pollutant emission rates associated with increased fuel combustion in boilers and engines, and increased vehicular activity associated with increased workforce under the Proposed Action and Reduced Operation Alternative were provided in air sections of the Draft LLNL SW/SPEIS. Total emissions were also provided for comparison with significance and conformity levels. Annual and daily significant emission levels were established by local air districts in response to local air quality concerns. A project that generates criteria air pollutant emissions in excess of these levels would be considered to have a significant air quality impact and stringent mitigation would be required. By evaluating project emissions as a whole, including motor vehicle emissions, the air district has a greater level of control over a project (i.e., it is not limited to stationary source permitting). In the Draft LLNL SW/SPEIS it was stated that a conformity review would be conducted and reported in the Final LLNL SW/SPEIS on projects that would generate criteria air pollutant emissions in excess of these levels. These sections have been updated to include the air conformity review for projects under the Proposed Action and Reduced Operation Alternative.
- A nonproliferation and treaty compliance discussion of the NIF project is included in the Final LLNL SW/SPEIS. These additions were made to Chapter 1 and Appendix M.
- The Proposed Action for a one time shipment of drums of mixed transuranic waste from Lawrence Berkeley National Laboratory to LLNL, so that LLNL can prepare them for shipment to the Waste Isolation Pilot Plant (WIPP) has been reduced from 14 to 5.

**TABLE 1.3–1.—Issue Categories**

<b>Category Code</b>	<b>Issue Category</b>
01	Policy
02	Programmatic Purpose and Need
03	Cost and Schedule
04	Proposed Action
05	No Action Alternative
06	Reduced Operation Alternative
07	Alternatives Considered But Eliminated
08	Other Alternatives
09	Land Use
10	Community Services
11	Prehistoric and Historic Cultural Resources
12	Aesthetics and Scenic Resources
13	Meteorology
14	Geology
15	Socioeconomics/Environmental Justice
16	Biological Resources
17	Air Quality
18	Water
19	Noise
20	Traffic and Transportation
21	Utilities and Energy
22	Materials and Waste Management
23	Human Health and Safety
24	Site Contamination and Remediation
25	Accidents
26	National Ignition Facility
27	Integrated Technology Project
28	Pollution Prevention
29	Emergency Response
30	Security
31	Regulatory Compliance (NEPA Process/Public Involvement/Community Relations)
32	Outside the Scope of the EIS
33	Plutonium Limits
34	Tritium Limits
35	BioSafety Level-3 Facility
36	Lawrence Berkeley National Laboratory Waste Drums
37	Developing New Technologies for Plutonium Pit Manufacturing
38	Container Security Testing Facility
39	Preparation for Test Readiness

**TABLE 1.3–2.—Index of Attendance at Public Hearings**

<b>Public Hearing Attendees</b>	<b>Document Page Number</b>
<b>April 27, 2004 – Livermore, CA-Afternoon Session</b>	<b>2-270 – 2-328</b>
Abbott, Robert, Livermore, CA	
Aguirre, Ena, Stockton, CA	
Alameda, Pasita, El Cerrito, CA	
Anderson, Carl, Oakland, CA	
Arnold, Janet, Oakland, CA	
Bardet, Marilyn, Benicia, CA	
Bauer, Crisley, Berkeley, CA	
Bechtel, Marilyn, Oakland, CA	
Boehm, Marjorie, WILPF, Elk Grove, CA	
Bough, Patricia, Livermore, CA	
Bowman, Margaret, Piedmont, CA	
Buchanan, Pat, Pax Christi, Hayward, CA	
Bunstock, Stuart, Davis, CA	
Burlingame, Shirley, Berkeley, CA	
Butler, Faye, Pax Christi, Fremont, CA	
Carlstad, Hal, Kensington, CA	
Carrosco, Frank	
Chambers, Frank	
Childs, Courtney, Pacific Grove, CA	
Clark, Dr. Henry, Richmond, CA	
Collonge, Chelsea, Berkeley, CA	
Conable, Sherry, Santa Cruz, CA	
Coons, Dean, Lafayette, CA	
Cuddy, Gayle, Livermore, CA	
De Bellis, Tony, Danville, CA	
De Jaegher, Veronique, San Geronimo, CA	
Dean, Michael, Colma, CA	
Dicus, Lyda, Walnut Creek, CA	
Dorabji, Tara, Tri-Valley CARES, Livermore, CA	
Dubrin, Jim, Walnut Creek, CA	
Evans, Peta, Livermore, CA	
Gallagher, Steve, Santa Rosa, CA	
Gaylord, Jean, Tri-Valley CARES, Castro Valley, CA	
George, Valori, Peace Coalition, Monterey Co., Pacific Grove, CA	
Gilbert, Ellen, Walnut Creek, CA	
Goodier, Lucille, Hillsborough, CA	
Goodpasture, O.P., Stella, Oakland, CA	
Gordon, Gene, Walnut Creek, CA	
Gould, Jeff	
Griffin, Annie	

**TABLE 1.3–2.—Index of Attendance at Public Hearings (continued)**

Public Hearing Attendees	Document Page Number
<b>April 27, 2004 – Livermore, CA-Afternoon Session (continued)</b>	<b>2-270 – 2-328</b>
Handell, David, Livermore, CA	
Hanson, Bob, Walnut Creek, CA	
Harrison, Norma	
Hart, Jon, Livermore, CA	
Hartono, Carmen, Oakland, CA	
Hoffman, Ron, Berkeley, CA	
Holman, Ed, Fremont, CA	
James, Helen, Pacifica, CA	
Jerbic, Ed	
Johnson, Cynthia, Berkeley, CA	
Kelley, Marylia, Tri-Valley CARES, Livermore, CA	
Kidder, Ray, Pleasanton, CA	
Kinchak, Lorraine, Grandmothers for Peace, Elk Grove, CA	
King, Beverly, Livermore, CA	
King, Donald	
Kozak, Gina	
Kring, Bernice, Grandmothers for Peace, Sacramento, CA	
Krska, Dan, Livermore, CA	
Lamarre, Albert, Livermore, CA	
Lasciak, Valerie, Santa Cruz, CA	
Levine, June, Walnut Creek, CA	
Loebel, Jane, Walnut Creek, CA	
Lubovoski, Barry, Alameda County Trades Council	
Lynch, Louise, Pax Christi, Fremont, CA	
Manley, James, Berkeley, CA	
Maxwell, Jane, Berkeley, CA	
McKee, Terri, Livermore, CA	
McKinnon, Rev. Don, Oakland, CA	
Miles, Bill, Livermore, CA	
Miles, Loulena, Tri-Valley CARES, Livermore, CA	
Miles, Yvonne, Pittsburg, CA	
Morgan, Jason, GreenLaw, Yakima, WA	
Munoz, Kelley, Livermore, CA	
Neyhart, Dirk, Berkeley, CA	
Oldfather, John, San Anselmo, CA	
Olin, Phyllis, Western States Legal Foundation, Berkeley, CA	
Olsen, Hebard, Monterey, CA	
Orman, Janet, Walnut Creek, CA	
Orton, J.C., Berkeley, CA	
Ott, Jim, Livermore Chamber of Commerce, Livermore, CA	
Perner, Mary, Tri-Valley CARES, Livermore, CA	

**TABLE 1.3–2.—Index of Attendance at Public Hearings (continued)**

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Piper, Josh, GreenLaw, Seattle, WA	
Priebat, Martha, Pleasanton, CA	
Rachel, Fran, Grandmothers for Peace, Berkeley, CA	
Rea, Paul, Concord, CA	
Reyes, Oscar	
Russell, Bob, Pleasant Hill, CA	
Russell, Natalie, Pleasant Hill, CA	
Sartor, Linda, Santa Rosa, CA	
Sovejec, Sasha, GreenLaw	
Schultz, Amy, Oakland, CA	
Sinclair, Alan, Santa Cruz, CA	
Spake, Eugene	
Strauss, Peter, San Francisco, CA	
Stribling, Jonathan	
Thomas, Dennis, Pleasant Hill, CA	
Thornton, Corine, Grandmothers for Peace, Hayward, CA	
Thornton, James, Hayward, CA	
Turner, Dan, Oakland, CA	
Tyndall, J.G., Oakland, CA	
Van de Brooke, Tomi, Rebuild California	
Wayne, Kim, Oakland, CA	
Wildwood, Annie, Cotati, CA	
Wright, Armin, Oakland, CA	
Yundt, Nanci, Loomis, CA	
Yundt, Scott, Berkeley, CA	
Zipoli, M., Dublin, CA	
<b>April 27, 2004 – Livermore, CA-Evening Session</b>	<b>2-329 – 2-392</b>
Akacich, Buddy, Tri-Valley CARES, San Ramon, CA	
Anderson, Mitchell, San Francisco Bay Guardian, Corte Madera, CA	
Bakhar, Lexi, Fairfield, CA	
Barber, Rachel, Concord, CA	
Benhard, Hans	
Best, Renee, Livermore, CA	
Bouyea, Lauren, Sausalito, CA	
Brechin, Vernon, Tri-Valley CARES, Mountain View, CA	
Browning, Virginia, Oakland, CA	
Bruner, Eva	
Buckley, Thad, Pleasanton, CA	
Burkhart-Schultz, Gordon, AID Employment, Castro Valley, CA	
Busby, Lee, Livermore, CA	
Buxton, Tia, Livermore, CA	
Cabanne, Donna, Sierra Club, Livermore, CA	

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Candell, Marlene, Berkeley, CA	
Clark, Norma, San Jose, CA	
Clinton, Alison, Livermore, CA	
Cox, Alice Jane, Morgan Hill, CA	
Cox, William, San Jose, CA	
Crosby, Betty, Livermore, CA	
Cuddy, Gayle	
Curien-Garcia, Michelle, Livermore, CA	
Dabrusin, Karen, California Peace Action, Berkeley, CA	
Davies, Walter, Livermore, CA	
DeVinney, Jean, Oakland, CA	
Dias, Tiffany, Livermore, CA	
Dolan, Eileen, Walnut Creek, CA	
Dunn, Chris, California Peace Action, San Francisco, CA	
Ender, Michael, Tracy, CA	
Ericson, Stephanie, Tri-Valley CARES, Dublin, CA	
Frisch, JoAnn, Tri-Valley CARES, Livermore, CA	
Garcia, Sharon, Livermore, CA	
Gould, Robert, Physicians for Social Responsibility, San Francisco, CA	
Grabam-Smith, Shelly, Livermore, CA	
Graf, Daniel	
Guist, Susan, WILPF, Morgan Hill, CA	
Hartmann, Maureen, Circle of Concern, Oakland, CA	
Hoon, Daryl, Livermore, CA	
Ipsen, Avaren, Berkeley, CA	
Israel, Carolyn, WILPF, Santa Cruz, CA	
Jardine, Phyllis, Pleasanton, CA	
Jimenez, Irene, Berkeley, CA	
Keehn, Suzanne, Palo Alto, CA	
Kelly, Marylia, Tri-Valley CARES	
Kelly, Stephen, Tri-Valley CARES, Oakland, CA	
Kendrick, Daniel, Tri-Valley CARES, Pleasanton, CA	
King, Donald	
Larkin, Don, Santa Cruz, CA	
Liebman, Matthew, Mountain View, CA	
Louder, Ben, Livermore, CA	
Lowell, Audrey & Fred	
Marin, Lynda, Santa Cruz WIT, Watsonville, CA	
Merrigan, Jean, Santa Cruz, CA	
Miles, Loulena, Tri-Valley CARES, Livermore, CA	
Morgan, Jason, GreenLaw, Yakima, WA	
Morgan, Noreen	

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Moyer, Lucille, San Jose, CA	
Namperumal, Srihari, California Peace Action, Berkeley, CA	
Nesbitt, Dale, East Bay Peace Action, Berkeley, CA	
Peace and Freedom Party	
Piper, Josh, GreenLaw, Seattle, WA	
Prisbrey Family, Livermore, CA	
Pryor, Mary & Tom, Livermore, CA	
Ramos, Vincent, Vallejo, CA	
Rauen, Elena, Santa Cruz WIT, Santa Cruz, CA	
Russell, Bob	
Sajoric, Sasha	
Sandine, Al, Kensington, CA	
Sara Ponsetti, Livermore, CA	
Schleis, August, Berkeley, CA	
Schultz, Gordon	
Shaw, Laura, Bonny Doon, CA	
Sheaffer, M.K., Livermore, CA	
Smith, Bennett, Livermore, CA	
Smith, Jerry & Nancy, Livermore, CA	
Sorgen, Phoebe, Berkeley, CA	
Spake, Eugene, Mill Valley, CA	
Stamps, Jacqueline, Livermore, CA	
Steinberg, D. Leah, El Sobrante, CA	
Stokes, Kathy, Livermore, CA	
Sutton, Patrice, Western States Legal Foundation, San Francisco, CA	
Tahir, Edna, Livermore, CA	
Torres, Diana, Vallejo, CA	
Veiluva, Michael, Western States Legal Foundation, Walnut Creek, CA	
Vernieu, Peggy, Berkeley, CA	
Vittitow, Marion, Santa Cruz WIT, Santa Cruz, CA	
Voss, Kara, California Peace Action, Berkeley, CA	
Vu, Quang	
Warner, John, Livermore, CA	
Wennenger, James & Janet, Oakland, CA	
Wildwood, Annie	
Williams, Stacy, Tri-Valley CARES, Livermore, CA	
Wing, Donna, Livermore, CA	
<b>April 28, 2004 – Tracy, CA-Afternoon Session</b>	<b>2-393 – 2-426</b>
Aguirre, Ena, Stockton, CA	
Bailey, Gary, Sunnyvale, CA	
Bakewell, Grant, Fellowship of Reconciliation, Carmichael, CA	
Belnap, Christopher, Berkeley, CA	

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Bliss, Virginia, Santa Cruz, CA	
Chapot, Eric, Tracy, CA	
Courtright, Caroline, Grass Valley, CA	
Dorabji, Tara, Tri-Valley CARES	
Eldredge, Lynnette, Nevada City, CA	
Feher, Zsuzsanna, Livermore, CA	
Flanagan, Judith, Berkeley, CA	
Fries, Marj, Connections-Peace & Justice Network San Joaquin County, Stockton, CA	
Huntoon, John, Stockton, CA	
Huntoon, Suzanne, Stockton, CA	
Kearns, Josh, Berkeley, CA	
Kelley, Marylia, Tri-Valley CARES, Livermore, CA	
Kuczora, Carol, Grass Valley, CA	
Langford, Bill, Tracy, CA	
Lombardo, Vicki, City of Tracy, Tracy, CA	
Marraco, Richard, Redwood City, CA	
McNeil, Ken, Tri-Valley Herald Newspaper, Pleasanton, CA	
Miles, Loulena, Tri-Valley CARES	
Salemi, Kombil, Santa Clara, CA	
Schmidt, Mike, Tracy Chamber of Commerce, Tracy, CA	
Schwartz, Sandra, AFSC, San Francisco, CA	
Seymour, Gail, Carmichael, CA	
Strauss, Peter, San Francisco, CA	
<b>April 28, 2004 – Tracy, CA-Evening Session</b>	<b>2-427 – 2-448</b>
Appleman, Francis, Tracy, CA	
Cadotte, Sister Blanche, Daughters of the Holy Spirit, Patterson, CA	
Cameron, Jack, Livermore, CA	
Carreau, Lucille, Patterson, CA	
Christian, Allen, Tracy, CA	
Condy, Alexis, Sacramento, CA	
de Groot, Ria, Pax Christi, Stockton, CA	
Enero, Ruth, Ceres, CA	
Forrest, John, Tracy, CA	
Fretter, Travis, Berkeley, CA	
Getty, Greg, Nuremberg Actions, Pittsburg, CA	
Green, Shirley, Sunol, CA	
Hoff, Marsha, Stockton, CA	
Janes, Shelby, Peace Action, Sacramento, CA	
Kelley, Marylia, Tri-Valley CARES, Livermore, CA	
Larkin, Don	
LeVeck, Paula, Peace & Justice Network, Stockton, CA	

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Moore, Patricia, Tri-Valley CARES, Livermore, CA	
Padilla, Manuel, Livermore, CA	
Rieger, Gail, Tracy, CA	
Sarvey, Bob, Tracy, CA	
Stone, R.E., Valley Springs, CA	
Turoff, Bernice, California Womens' Agenda, Stockton, CA	
Zahn, Ken, Tracy, CA	
<b>April 30, 2004 – Washington, DC</b>	<b>2-449 – 2-473</b>
Arant, Kristen, Rhythm Workers Union, Washington, DC	
Bloum, Peter, Alliance for Nuclear Accountability, Washington, DC	
Bridgman, Jim, Alliance for Nuclear Accountability, Washington, DC	
Brumfield, Geoff, Nature Magazine, Washington, DC	
Burnham, Michael, Greenwire, Washington, DC	
Castaldini, Carlo, Sunnyvale, CA	
D'Arrigo, Diane, NIRS, Washington, DC	
Davis, Syrena, Rhythm Workers Union, Silver Spring, MD	
Doyle, Michael, McClatchy Newspapers, Washington, DC	
Ellington, Jenefer, Green Party, Washington, DC	
Glenzer, Michael, Exchange Monitor Publications, Washington, DC	
Harrington, Chris, University of California, Washington, DC	
Krieger, Kim, AAAS, Washington, DC	
LaLand, Ilene, Rhythm Workers Union, Reisterstown, MD	
Leventhal, Paul, Nuclear Control Institute, Washington, DC	
Makhijani, Arjun, IEER, Takoma Park, MD	
Miles, Loulena, Tri-Valley CARES, Livermore, CA	
Oelrich, Ivan, Federation of American Scientists, Washington, DC	
Paine, Christopher, NRDC, Washington, DC	
Post, Carol, Silver Spring, MD	
Safdeye, Francine, Physicians for Social Responsibility, Washington, DC	
Samson, Victoria, Center for Defense Information, Washington, DC	
Stanlick, Sarah, Physicians for Social Responsibility, Washington, DC	
Sterner, Andrea, Rhythm Workers Union, Clifton, VA	
Yaroswinskaya, Alla, IEER, Takoma Park, MD	

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Harrison, Norma	2-312
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Rachel, Fran, Grandmothers for Peace	2-296
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Sovejec, Sasha, GreenLaw	2-275
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Allen, Karen, Concord, CA	2-13
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Bault, William, Nevada City, CA	2-26
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Cousino, Val, San Jose, CA	2-87
Darr, Norma, Venice, CA	2-88
Dayaneni, Gopal, Berkeley, CA	2-88
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Duane, Judy	2-94
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Duncan, Susan, Oakland, CA	2-96
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Eiseley, Jane, Berkeley, CA	2-99
Eiseley, Jane, Berkeley, CA	2-100
Elhayek, Jalal, Santa Cruz, CA	2-100
Ellis, Rob, Nederland, CO	2-101
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Fisher, Helen M., Bend, OR	2-107
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Fountain, Aimee	2-109
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Garrison, Richard, Stone Mountain, CA	2-112
Gass, Michael	2-112
Gilbert, Carol, Alderson, WV	2-113
Gould, Jeff, Alameda, CA	2-113
Graf, Daniel, Sunnyvale, CA	2-114
Graham, Kellie, Berkeley, CA	2-116
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Hirt, James, Pleasanton, CA	2-158
Ho, Esther M., Hayward, CA	2-158
Houston, Betty S., Davis, CA	2-159
Hudson, Jackie, Adelanto, CA	2-160
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Ipsen, Avaren, Berkeley, CA	2-162
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Junell, Greg, San Luis Obispo, CA	2-166
Kate-Turner, Janis, Livermore, CA	2-167
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Kendrick, Daniel, Pleasanton, CA	2-168
Kent, Stephen, Garrison, NY	2-169
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Lang, Michael, Berkeley, CA	2-179
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MacDougall, John, Lowell, MA	2-191
MacKinnon, Fr. Donald, CSsR, Berkeley, CA	2-191
Makhijani, Arjun, Ph.D., Washington, DC	2-192
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Markman, Leona	2-195
Marks, Diane D., Bass Lake, CA	2-197
Marquis, Louise, Berkeley, CA	2-197
Martin, John W., Thousand Palms, CA	2-199
Maybury, John, Pacifica, CA	2-199
McCann, Katherine, Hillsborough, CA	2-200
McCauley, Jacqueline, La Miranda, CA	2-200
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Miles, Del	2-208
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Moon, Donald W.	2-210
Moore, Charles V., Laguna Woods, CA	2-211
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Mueller, Lynn, Berkeley, CA	2-213
Murray, Sarah	2-218
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Nielsen, David, Mountain View, CA	2-235
Nordlund, James M.	2-235
Oldfather, Jonathan, San Anselmo, CA	2-253
Osman, Jeffrey, Santa Cruz, CA	2-253
Palmer, Janet L., Livermore, CA	2-258
Pardee, Thomas and Marjorie, Davis, CA	2-258
Perdomo, Cristina	2-259
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Pollock, Anneliese, Palo Alto, CA	2-266
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Raycraft, Susan, Lockwood, CA	2-475
Reddy, Ajay	2-477
Reid, Heather, Martinez, CA	2-477
Reim, Nancy	2-478
Rendon, Mark, Berkeley, CA	2-478
Rentz, Tanya, Grass Valley, CA	2-479
Reynolds, Joan, Ludlow, WA	2-479
Ricker, Jr., T.G., Mountain View, CA	2-481
Riley, George, Pacific Grove, CA	2-482
Riverwoman, Barbara	2-482
Rothenberg, P.E., Keith, Livermore, CA	2-483
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Savage, Matt	2-488
Sawyer, Kathryn S., Oakland, CA	2-489
Schleis, Gus, Berkeley, CA	2-489
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Sroufer, Becky, Sacramento, CA	2-503
Stanislavsky, Ann L., Santa Cruz, CA	2-504
Sterner, Andrea, Clifton, VA	2-505
Stevenson, Bill and Maria, Davis, CA	2-506
Stevenson, Martin, Santa Barbara, CA	2-506
Stocking, Dale E., Stockton, CA	2-507

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Sultar, Joanne, Berkeley, CA	2-511
Sumrall, Amber, Coverdale, Soquel, CA	2-511
Sutton, Patrice, M.P.H., San Francisco, CA	2-513
Thomas, Dennis, Pleasant Hill, CA	2-523
Thompson, Bill and June, Bayside, CA	2-523
Thompson, John, Carmel, CA	2-524
Thompson, June, Bayside, CA	2-524
Tobin, Bryndis	2-525
Torres, Zoe Marie, San Francisco, CA	2-525
Vernieu, Peggy, Berkeley, CA	2-573
Vince	2-574
Wahrer, Carol, Livermore, CA	2-575
Weil, Janet, Concord, CA	2-577
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White, Danielle	2-586
Wieder, Mark, Berkeley, CA	2-590
Wilson, Beth, Davis, CA	2-590
Woodcock, Charlene, Berkeley, CA	2-591
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Alliance for Nuclear Accountability, John Bridgman, Washington, DC	2-14
American Friends Service Committee, Sandra Schwartz, Peace Education Coordinator	2-15
Blue Ridge Environmental Defense League, Louis A. Zeller, Glendale Springs, CA	2-29
California Air Resources Board, Research Division, Bart E. Croes, P.E., Chief, Sacramento, CA	2-56
California Energy Commission, Robert L. Therkelsen, Executive Director, Sacramento, CA	2-56
California Regional Water Quality Control Board, Central Valley Region, Susan Timm, Site 300 Remedial Project Manager, Rancho Cordova, CA	2-58
California Regional Water Quality Control Board, San Francisco Bay Region, Naomi Feger, Remedial Project Manager, Oakland, CA	2-59
Center for Defense Information, Victoria Samson, Research Analyst, Washington, DC	2-66
Central Valley Regional Water Quality Control Board, Susan Timm, Project Manager, Rancho Cordova	2-67
Citizens for Alternatives to Chemical Contamination, Kay Cumbow, Chairperson, Lake, MI	2-67
City of Livermore, Marshall Kamena, Mayor, Livermore, CA	2-70
City of Santa Cruz, Scott Kennedy, Santa Cruz, CA	2-74
Coalition for a Safe Lab, Mary Wulf, Hamilton, MT	2-74
Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair, Berkeley, CA	2-76
Concerned Citizens for Nuclear Safety, Amy Williams, Media Network Coordinator, Santa Fe, NM	2-83
Department of California Highway Patrol, D.O. Helmick, Commissioner, Sacramento, CA	2-90

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Fellowship of Reconciliation, Grant Bakewell, Chaplain and Facilitator, Sacramento Valley Chapter, Oakland, CA	2-103
Grandparents for Peace of Rossmoor, Robert Hanson	2-117
Gray Panthers of Marin, Louise Aldrich, Co-Convenor, San Rafael, CA	2-117
GreenLaw, University of Washington School of Law, Seattle, WA	2-118
Green Party USA, Don Fitz	2-151
Livermore Chamber of Commerce, Jim Ott, Livermore, CA	2-186
Medact, Dr. E. Waterston, London, UK	2-203
Natural Resources Defense Council, Christopher Paine, Senior Nuclear Program Analyst, Charlottesville, VA	2-220
Natural Resources Defense Council, Nuclear Program, Christopher Paine, Senior Analyst, Charlottesville, VA	2-223
Natural Resources Defense Council, Matthew McKinzie, Ph.D., Staff Scientist, Washington, DC	2-230
Nevada Desert Experience, May F. Schultz, Outreach Coordinator, Oakland, CA	2-233
Nuclear Age Peace Foundation, David Krieger, President, and Justine Wang, Research and Advocacy Coordinator, Santa Barbara, CA	2-237
Nuclear Control Institute, Paul Levanthal, President, Washington, DC	2-239
Nuclear Control Institute, Paul Levanthal, President, Washington, DC	2-239
Nuclear Information and Resource Service, Diane D'Arrigo, Washington, DC	2-244
Nuclear Watch of New Mexico, Jay Coghlan	2-247
Nuremberg Actions, Greg Getty, Pittsburg, CA	2-250
Nuremberg Actions, Greg Getty, Pittsburg, CA	2-250
Office of Peace, Justice, and Care of Creation, Dominican Sisters of Mission San Jose, CA, Stella Goodpasture, Oakland, CA	2-251
Physicians for Social Responsibility, Robert M. Gould, MD, President, Berkeley, CA	2-261
Physicians for Social Responsibility, Robert K. Musil, Ph.D., M.P.H., Washington, DC	2-264
Rich Buckley Realty, Rich Buckley, Livermore, CA	2-480
San Francisco Bay Regional Water Quality Control Board, Naomi L. Feger, Remedial Project Manager, Oakland, CA	2-484
Sierra Club, Tri-Valley Regional Group, Donna Cabanne, Pleasanton, CA	2-495
Snake River Alliance, Jeremy M. Maxand, Boise, ID	2-498
State of California, Terry Roberts, Director, State Clearinghouse, Sacramento, CA	2-504
Taxpayers for Common Sense, Austin Clemens, Washington, DC	2-515
The Magic Carpet, Eileen Jorgensen, Nevada City, CA	2-516
The RadioActivist Campaign (TRAC), Norm Buske	2-516
Tracy Region Alliance for a Quality Community	2-526
Tri-Valley CAREs, Loulena Miles, Staff Attorney, Livermore, CA	2-526
Tri-Valley CAREs, Marylia Kelley, Livermore, CA	2-527
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San Francisco Bay Regional Water Quality Control Board, Naomi L. Feger, Remedial Project Manager, Oakland, CA	2-484

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U.S. Department of Peace Coalition, Prof. Marjorie Zamora and Peacemakers Action Coalition, Alan Sinclair	2-563
U.S. Environmental Protection Agency, Lisa B. Hanf, Manager, Federal Activities Office, San Francisco, CA	2-564
U.S. Senate, Barbara Boxer, U.S. Senator, Washington, DC	2-572
Western States Legal Foundation and the Lawyers Committee for Nuclear Policy, Andrew Lichterman, Program Director, Oakland, CA	2-579
Western States Legal Foundation, Phyllis Olin, Esq., President of the Board, Oakland, CA	2-585

**TABLE 1.3–6.—Signatories to Campaign Letter 1**

List of Signatories – Campaign Letter 1 (Sample Document Page Number 2-60)	
Acosta, Patricia, San Francisco, CA	Bess, Mary, San Mateo, CA
Acquista, Susan, Santa Barbara, CA	Bethany
Agosta, Sharrel, Arcadia, CA	Bettencourt, Gilda, San Francisco, CA
Aguilar, Felix, Long Beach, CA	Beverly, Parrish, Oakland, CA
Allebe, Adrienne, Long Beach, CA	Biggs, John, Ojai, CA
Allen, Bridget, Santa Barbara, CA	Binckley, Charles, Richmond, CA
Alliot, Emmanuel, San Ramon, CA	Bleu, Roland
Alpert-Sandler, Blair, San Francisco, CA	Blosdale, Christine, North Hollywood, CA
Anant, Birjinder	Blumberg, Marc, Santa Cruz, CA
Anderson, John H., San Diego, CA	Bojorquez, Kathryn, Los Angeles, CA
Arbuckle, Nancy, Redwood City, CA	Borrego, Coleen, Davis, CA
Aronoff, Shelley, Los Angeles, CA	Bouton, Pauline, Los Angeles, CA
Arsenault, Wendy, Capitola, CA	Bowman, Katherine, Berkeley, CA
Atchison, Jasmine, Alameda, CA	Boydston, Stanley, Santa Barbara, CA
Aul, David, Los Angeles, CA	Brackett, Alan, Los Angeles, CA
Bade, Anne, Berkeley, CA	Brady, Theresa, Chatsworth, CA
Baeuchene, Kate, Santa Monica, CA	Breiby, Wendy, Tisbury, MA
Bailey, Charmaine, San Francisco, CA	Briones, Elena, Los Angeles, CA
Bains, Betty, Glendale, CA	Brown, Margaret, Arcata, CA
Baldwin, Suzanne, Fremont, CA	Brown, Tom, Santa Monica, CA
Baloun, Karel, Orinda, CA	Buerkle, Melanie, Ventura, CA
Banzhaf, Desiree, Santa Cruz, CA	Buice, Charles, Berkeley, CA
Banzhaf, Joyce, Santa Cruz, CA	Bunstock, Stuart, Davis, CA
Barnard, Irene, San Francisco, CA	Burke, Elizabeth, Oak View, CA
Bartulovich, Joan Backus, El Cerrito, CA	Burkey, Doug, Point Arena, CA
Bates, Angela, Santa Barbara, CA	Burkey, Jediah, Santa Clara, CA
Beadman, Nick, San Luis Obispo, CA	C.R., Berkeley, CA
Beall, Dennis, Cazadero, CA	C.S., Berkeley, CA
Belisle, Mavis, Panhandle, TX	Caindec, Cara, San Rafael, CA
Bell, Cheryl, Culver City, CA	Callan, Sean, Pacifica, CA
Bennett, Alice J., South Pasadena, CA	Cameron, Ethan, Nevada City, CA
Berg, Douglas, San Jose, CA	Carroll, Sharon, Santa Barbara, CA
Berg, Ricardo U., Los Angeles, CA	Carter, Channing, Santa Barbara, CA
Bertulis, Nik, Oakland, CA	Casey, Charles, Morgan Hill, CA

**TABLE 1.3–6.—Signatories to Campaign Letter 1 (continued)**

<b>List of Signatories – Campaign Letter 1 (Sample Document Page Number 2-60)</b>	
Castelli, Emily, Berkeley, CA	Fitzpatrick, Tom, Los Angeles, CA
Cayton, Sheila, Santa Cruz, CA	Foisie, Greg, Lancaster, CA
Chace, Cindy, Santa Cruz, CA	Fontenot, Rodney, Los Angeles, CA
Childs, Courtney, Carmel, CA	Foss, Janice, El Cerrito, CA
Christianson, Kathleen, Valencia, CA	Foster, Claudia, Venice, CA
Chyou, Shang-Woo, Oak Park, CA	Fox, Noah, Berkeley, CA
Clarke, Marilyn, Danville, CA	Frankel, Seth, Los Angeles, CA
Claycomb, Andrew, Los Angeles, CA	Fung, Sherman, Pasadena, CA
Coale, Ruth, Los Altos, CA	Gaeta, Michael, San Jose, CA
Cohen, David, Tarzana, CA	Galieti, Ronald J., San Diego, CA
Cory, Joya, San Francisco, CA	Garberpro, David, Pasadena, CA
Cothes, Gail, Capitola, CA	Garcia, Michael J., Huntington Beach, CA
Cowan, Barry, Santa Monica, CA	Gardner, Jon, Mill Valley, CA
Cox, William, Morgan Hill, CA	Garellick, Avi, Berkeley, CA
CR, Berkeley, CA	Glasgow, Hamidah, Los Angeles, CA
Craig, Carrie, Santa Cruz, CA	González, Rafael J., Berkeley, CA
CS, Berkeley, CA	Gordon, Malcolm, Marina del Rey, CA
Cullimore, Holliday, Berkeley, CA	Gorin, Shlomit, San Francisco, CA
Cutler, Gregory, Los Angeles, CA	Gotvald, Mark, Pleasant Hill, CA
Cuyugan, Vivena, San Francisco, CA	Grace, Cindee, Eureka, CA
Daane, Jack, San Mateo, CA	Graham, Kimberley, Coronado, CA
de Anelis, Fusako, Berkeley, CA	Granda, Melosa, Los Angeles, CA
del'Giudice, Janet, Santa Barbara, CA	Granda, Melosa, Los Angeles, CA
Denny, Wendy, Sebastopol, CA	Green, Douglas, Sherman Oaks, CA
Depew, Joan, Pasadena, CA	Greene, Richard, Seaside, CA
Detwiler, Winifred, Sacramento, CA	Greenfield, Deborah, Sylmar, CA
Dietlin, Therese, Los Angeles, CA	Griffin, Rebecca, Berkeley, CA
Dimillo, Jean, San Francisco, CA	Griswold, Elizabeth, Carlsbad, CA
Dishion, Catherine, Santa Barbara, CA	Grunbaum, Dorien, Los Angeles, CA
Dobrowolski, Rafal, San Diego, CA	Guffey, John, Estes Park, CO
Domenzain, Alejandra, Los Angeles, CA	Guice, Jill, Berkeley, CA
Dorabji, Sohrab, Santa Rosa, CA	Guy, Darien, Campbell, CA
Dorabji, Tara, Livermore, CA	Guzzetta, Steve, San Jose, CA
Dourley, Kathleen, Claremont, CA	Gwinn, Deanne, Soledad, CA
Dowd, Dristine, Aptos, CA	Haar, Eric, Oakland, CA
Edgar, Elaine, Sacramento, CA	Hall, Sarah Jane, Burbank, CA
Eldredge, Lynnette, Nevada City, CA	Hall, William, Palo Alto, CA
Ellison, George, San Diego, CA	Hallidy, Shelli, Carlsbad, CA
Elsdon, Linda, Danville, CA	Hanson, Nancy, Topanga, CA
Elsdon, Ron, Danville, CA	Harary, Carla, Los Angeles, CA
Englander, Claire, Oakland, CA	Hardack, Richard, Berkeley, CA
Enright, Mary, Grass Valley, CA	Harman, R. Michael, Palo Alto, CA
Epps, Jennifer, Milwaukee, WI	Harper, Jeana, Nambour, Queensland
Ercolani, Henry, Long Beach, CA	Harradine, Gabrielle, Los Angeles, CA
Evjion, Virginia, Kensington, CA	Harrison, Francesca, Altadena, CA
Fairfield, Mary Eaton, Oakland, CA	Harrison, Joseph, Oakland, CA
Fani, Natali, Silver Spring, MD	Harrison, Norma J.F., Berkeley, CA
Fargey, Emy, Santa Barbara, CA	Hartsough, David, San Francisco, CA
Farrell, Patricia, San Francisco, CA	Haskins, John, Castroville, CA
Festo, Gregory, Simi Valley, CA	Hatfield, Richard, Palo Alto, CA
Finn, Daniel, Los Angeles, CA	Haugan, Janice, Berkeley, CA
Fischer, Doug, Santa Barbara, CA	Hawkins, Tyler, Davis, CA
Fishman, Mary, Berkeley, CA	Henson, Brad, Los Angeles, CA

**TABLE 1.3–6.— Signatories to Campaign Letter 1 (continued)**

<b>List of Signatories – Campaign Letter 1 (Sample Document Page Number 2-60)</b>	
Heyward, J.L., San Francisco, CA	Lasciak, Valerie, Santa Cruz, CA
Hiser, Julia, Santa Cruz, CA	Leary, Marjean, St. Paul, MN
Hofmann, Daniel, Newport Beach, CA	Lee, Susan, Palo Alto, CA
Honey, Helen, Santa Cruz, CA	Legacki, Wendy, Los Angeles, CA
Horstmann, Melanie, Santa Cruz, CA	Lehr, Jennifer, Topanga, CA
Hull, Hazel, Goleta, CA	Lemone, Susan, Los Angeles, CA
Hulsman, Maryann, Davis, CA	Lerner, Lora, Santa Cruz, CA
Hyde, Jane, Orinda, CA	Lewis, Debra, Richmond, CA
Irvine, Marion, San Rafael, CA	Lewis, Marvin, Philadelphia, PA
Irving, Bruce, San Francisco, CA	Lierheimer, Lance, Oakland, CA
Israel, James, Sacramento, CA	Lilly, Heather, Venice, CA
Jackson, Phyllis, Glendale, CA	Lind, Pedro, Oakland, CA
Jacobson, Dana, Aptos, CA	Lista, Cassandra, Santa Rosa, CA
James, Barbara and Phil, Claremont, CA	Loft, Lindsay, Davis, CA
James, LeeAnn, Mountain View, CA	Long, Travis, Monterey, CA
Jameson, Brigita, Sherman Oaks, CA	Lopez, Natalia, Washington, DC
Jantzen, Carell, Santa Barbara, CA	Lopez-Balbontin, Adrian, Santa Monica, CA
Jess, Maura, Goleta, CA	Lords, Erik, North Hollywood, CA
Johnson, Marta, Mokelumne Hill, CA	Loren, Giselle, Los Angeles, CA
Johnston, Alison, San Francisco, CA	Lorenzo, Lori, Oakland, CA
Johnston, Jill, San Antonio, TX	Lunsford, Jessica, Carpinteria, CA
Joi, Suzanne, Berkeley, CA	Lusgarden, Steve, Santa Cruz, CA
Jones, Georja, Santa Monica, CA	MacIain, Adrienne, Goleta, CA
Jones, Gerald, Sherman Oaks, CA	Magruder, Graeme, Northridge, CA
Kalins, David, Richmond, CA	Mahan, James, West Hollywood, CA
Katz, Michael, Berkeley, CA	Mahan, Jodi, Felton, CA
Kaufman, Katherine, Los Angeles, CA	Mak, Karin, Monterey Park, CA
Kealey, Melissa, Berkeley, CA	Malouf, Patricia, Burbank, CA
Kellett, Jessica, Tiburon, CA	Markley, Karen, Laguna Niguel, CA
Kelly, Carol, Oakland, CA	Markman, Leona, Aptos, CA
Kendrick, Daniel, Pleasanton, CA	Marks, Todd, Pasadena, CA
Kerr, Joshua, Los Angeles, CA	Markus, Mark, Garden Grove, CA
King, Shawn, Davis, CA	Marr, Patrick, Santa Barbara, CA
Kinne, Anne, Arcata, CA	Marshall, Patricia, Pacific Grove, CA
Kitwana, Ajamu, New York, NY	Mastramico, Lisa, Santa Cruz, CA
Klecker, Janet, Sonoma, CA	Maxand, Jeremy, Boise, ID
Kleinmans, Penelope, Scotts Valley, CA	McCarthy, Cindy, Santa Rosa, CA
Klusman, Eric, Los Angeles, CA	McCorkle, Locke, Palo Alto, CA
Kluter, Andrew, Berkeley, CA	McCourt, Linda, Belmont, CA
Knight, James, Los Angeles, CA	McDonald, Alexandra, Occidental, CA
Koivisto, Ellen, San Francisco, CA	McDonald, Lucy, Pleasanton, CA
Korzen, Katie, Reseda, CA	McDonald, Mary Ann, Sacramento, CA
Kramer, Nancy, San Francisco, CA	McGinnis, Patrick, Twain harte, CA
Kramer, Nora, San Francisco, CA	McHarg, Cameron, Los Angeles, CA
Krupnik, Tim, Davis, CA	McIntosh, William, San Anselmo, CA
Kvammen, John, Pasadena, CA	McKnight, Shoshanah, Santa Cruz, CA
La Chance, Christine, Summerland, CA	Meckfessel, Tom, Pt. Reyes, CA
Laiti, Jared, Santa Rosa, CA	Meek, Justin, Los Angeles, CA
Lamotte, Diane, Aptos, CA	Meyers, Gabe, Oakland, CA
Lancelotlotti, Peter, Los Angeles, CA	Michael, Wike, Studio City, CA
Lang, E., Oakland, CA	Miller, Leslie, Northridge, CA
Langan, Mark, San Francisco, CA	Moeller, Michael, Los Angeles, CA
Lapides, Jeffrey, Sierra Madre, CA	Mohr, Gregory, Santa Barbara, CA

**TABLE 1.3–6.— Signatories to Campaign Letter 1 (continued)**

<b>List of Signatories – Campaign Letter 1 (Sample Document Page Number 2-60)</b>	
Moran, Andrew, San Francisco, CA	Rocchio, Anne, West Hollywood, CA
Morin, Ed, Santa Barbara, CA	Rood, Timothy, Piedmont, CA
Nack, Jessica, Berkeley, CA	Rosanelli, Donald, East Rutherford, NJ
Nakai, Aaron, San Francisco, CA	Rosen, Jo-Anne, Petaluma, CA
Narey, Daniel, Santa Cruz, CA	Rosenberg, Laura, Ventura, CA
Naylor, William, Topanga, CA	Rosenblum, Stephen, Palo Alto, CA
Newburgh, Tobin, Davis, CA	Rosenstein, Richard and Carolyn, Los Angeles, CA
Nicholas, Madonna, Newark, CA	Ross, Marie, Vallejo, CA
Nielson, Bridger, Los Angeles, CA	Roth, Jean, Los Altos Hills, CA
Nokes, Mark, Palo Alto, CA	Royse, Justin, Claremont, CA
Nolan, Kim, Waterford, CA	Rundle, Robert, Studio City, CA
Nordlund, James M., Stockton, KS	Ruth, Carol, Stanford, CA
Norsigian, Judy, Newton, MA	Ruymaker, Ethel, Oakland, CA
Nowak, Susan, Los Angeles, CA	Sackman, Mike and Family, Savage, MN
Olson, Miles, Santa Rosa, CA	Salcido, Michael, Pinole, CA
Orlando, Anne, Davis, CA	Sall, Jeni, Descanso, CA
Osman, Jeffrey, Santa Cruz, CA	Salvato, Rosalie, Torrance, CA
Owings, Sarah, Los Angeles, CA	Samsami, Farshid, Burlingame, CA
Pacheco, Lorraine, Millbrae, CA	Sanchez, Ana, Newport Beach, CA
Pampalone, Barbara, Chatsworth, CA	Sanders, Gary, Palo Alto, CA
Pann, Robert, Los Angeles, CA	Sands, Diane, Sierra Madre, CA
Paolilli, Dena, Long Beach, CA	Santos, Brooke, Goleta, CA
Parrish, Beverly, Oakland, CA	Schaaf, Stephanie, Mountain View, CA
Partovi, Ali, San Francisco, CA	Scarpulla, Michael, Berkeley, CA
Pearson, Todd, Redondo Beach, CA	Scharlack, Meyer, Santa Cruz, CA
Pella, Philip, San Lorenzo, CA	Scherb, Eva, Los Angeles, CA
Pendleton, Jenny, Altadena, CA	Schoen, Lora, Walnut Creek, CA
Perez, Rosenda, Santa Cruz, CA	Schoenstein, Cecilia, Fremont, CA
Perner, Mary, Livermore, CA	Schreck, Heather, Los Angeles, CA
Pierce, Carol, Ojai, CA	Schrerb, Eva, Los Angeles, CA
Platt, Ronald, Santa Cruz, CA	Schwartz, Elaine G., Ph.D, Santa Cruz, CA
Plowright, Raina, Davis, CA	Semo, Todd, San Francisco, CA
Port, Holly, Culver City, CA	Seymour, Paul, Aptos, CA
Povill, Jon, Topanga, CA	Shabazian-Clark, Karen, Walnut Creek, CA
Powers, Kristen, Katy, TX	Shafer, Brook, Santa Monica, CA
Prola, Jim, San Leandro, CA	Sieck, David, Mokelumne Hill, CA
Puuohau-Pummill, Lenore, Hilo, HI	Sievers, Lori, Davis, CA
Rad, Kaveh, Oakland, CA	Simpson, David, Berkeley, CA
Rainville, Michelle, Santa Barbara, CA	Sinclair, John, Petaluma, CA
Ramirez, Adam, Santa Barbara, CA	Slater, Alice, New York, NY
Randolph, Robin, Berkeley, CA	Smiley, Susan, Goleta, CA
Rankow, Elizabeth, Oakland, CA	Smith, Paul, Oakland, CA
Rauh, Peter, Los Angeles, CA	Smith, Sonja, Los Angeles, CA
Read, Michelle, San Bernardino, CA	Smith, Zeke, San Anselmo, CA
Reagan, Gertrude, Palo Alto, CA	Snap, Frank, Oakland, CA
Reback, Mark, Los Angeles, CA	Snow, Scott, Oakland, CA
Renaker, Marilyn, Hyampom, CA	Snowber, Timothy, Camarillo, CA
Reynolds, CJ, Burbank, CA	Sobel, Valerie, Oakland, CA
Rice, William, Santa Barbara, CA	Sollars, Chris, San Francisco, CA
Richards, Lawrence S., Lake Balboa, CA	Sonnenfeld, Josh, Santa Cruz, CA
Richmond, Simone, Oakland, CA	Soost, Robert, Inverness, CA
Rideout, Scott, Oakland, CA	Spann, Mark, Seattle, WA
Ritmit, Joshua, Pasadena, CA	

**TABLE 1.3–6.— Signatories to Campaign Letter 1 (continued)**

<b>List of Signatories – Campaign Letter 1 (Sample Document Page Number 2-60)</b>	
Spatz, Tenley, San Francisco, CA	Van Belleghem, Bridgit, Arroyo Grande, CA
Spear, Vanessa, San Francisco, CA	Van Doren, Diana, Berkeley, CA
Sperry, Raphael, San Francisco, CA	Vance, Aileen, Santa Cruz, CA
Spiegel, Sara, Redwood City, CA	VanderZanden, Vanessa, Los Angeles, CA
Spiegel, Victor, Berkeley, CA	Velazquez, Gerardo, Soquel, CA
Stambler, Deborah, Los Angeles, CA	Vick, Julie, Los Angeles, CA
Steane, Catherine, Oakland, CA	Vinit, Allen, San Rafael, CA
Steen, Alan, Napa, CA	Visscher, William, Oakland, CA
Stein, Andrew, Davis, CA	Vogel, Eric, Venice, CA
Steinberger, Joseph, San Francisco, CA	Wallace, Holly, San Rafael, CA
Steiner, Neal, Los Angeles, CA	Waller, Carolyn, Strathmore, CA
Stewart, Margaret Macdonald, Ketchum, ID	Waln, Kirk, Ventura, CA
Stocking, Arianne, San Rafael, CA	Walters, Lawrence, Flagstaff, AZ
Stone, Helen, Bend, OR	Walton, Joyce, Berkeley, CA
Stovall, Josephine, Santa Cruz, CA	Wang, T.K., Los Angeles, CA
Strickland, Juila, Los Angeles, CA	Wechsler, Curt, San Mateo, CA
Stucker, Nancy, Soquel, CA	Weicker, Dorothy, Gualala, CA
Suh, Tony, Lafayette, CA	Wenzlaff, Frederick, Los Angeles, CA
Suzuki, Lorraine, Los Angeles, CA	Whisman, Jon, Long Beach, CA
Swanson, Roberta, Los Angeles, CA	White, Steven, Spring Valley, NY
Swartz, Brianna, San Luis Obispo, CA	Whitis, Van, Palo Alto, CA
Tallman, Molly, Berkeley, CA	Williams, Amy, Santa Fe, NM
Taormina, Talma, Pacific Grove, CA	Winslow, George, Capitola, CA
Tasi, Deanna, Albany, CA	Wittenstein, Andreas, San Geronimo, CA
Taussig, Thomas, Richmond, CA	Witty, Lora, North Hollywood, CA
Terrall, Ben, San Francisco, CA	Woods, Alexandra, Soquel, CA
Terrill, K., Los Angeles, CA	Wool, Abigale, Long Beach, CA
Terry, Elizabeth, Oakland, CA	Worlow, Linda Lee, Claremont, CA
Thole, Tani, Santa Cruz, CA	Wright, Lori, San Anselmo, CA
Thompson, Johanna, San Jose, Costa Rica	Wright, Warren, Oakland, CA
Tichman, Nadya, Oakland, CA	Wrye, Sriel, Los Angeles, CA
Toback, Dan, Los Angeles, CA	Wysel, Lisa, Santa Barbara, CA
Tolberg, Adelaide, Kensington, CA	Wysocki, Cheryl, Pasadena, CA
Tollefson, Donald, Encino, CA	Wysocki, Tao, Davis, CA
Tremaine, Leonie, Oceanside, CA	Yeretsian, Ojig, Oakland, CA
Troup, Dave, Fairfax, CA	Young, Kathryn, Berkeley, CA
True, Patrick, Soquel, CA	Young, Kristofer, Ojai, CA
Tucker, Laurel, Claremont, CA	Young, Laurie, Los Angeles, CA
Tullius, Michael, Encino, CA	Yundt, Scott, Berkeley, CA
Ulring, Karen, San Francisco, CA	Zapeta, Jose, Oakland, CA
Unnold, Patrick, Brisbane, CA	Zeiss, McKenzie, Irvine, CA
V., Bethany, Baltimore, MD	Zeller, Rudy, El Sobrante, CA
Van Alen, Emily, La Verne, CA	Zents, Amy, Davis, CA
	Zylius, Patricia, Santa Cruz, CA

**TABLE 1.3–7.—Signatories to Campaign Letter 2**

<b>List of Signatories – Campaign Letter 2 (Sample Document Page Number 2-62)</b>
Binkley, Thad L., Pleasanton, CA
California Communities Against Toxics, Jane Williams, Rosamond, CA
Cantu, Katrina, San Diego, CA
Citizen Alert, Peggy Maze Johnson, Las Vegas, NV
Eichelberger, Serina
Greenpeace International, Tom Clements, Washington, DC
Hoffman, Brendan, Washington, DC
Kneeland, Suzy
Layborurn, Bob and Margaret
Laybourn, Dan
Laybourn, Jim
Laybourn, John
Laybourn, Royal
Lewis, Marvin, Philadelphia, PA
Livermore Conversion Project, Sherry Larson- Beville, Oakland, CA
Maxwell, Paul
Maxwell, Tat
McComb, Angela
Morearty, John, Ph.D
Peninsula Peace and Justice Center, Paul George, Palo Alto, CA
Rocky Mountain Peace and Justice Center, Erin Hamby, Boulder, CO
Texuria, Deborah M., Santa Cruz, CA
Walker, Sydney, Santa Rosa, CA
Wolff, Jesa, San Francisco, CA
Women’s International League for Peace and Freedom, Sandy Silver and Darien De Lu, Philadelphia, PA
Wulff, Mary, Hamilton, MT
Illegible name

**TABLE 1.3–8.—Signatories to Campaign Letter 3**

<b>List of Signatories – Campaign Letter 3 (Sample Document Page Number 2-64)</b>	
Alibrandi, Tom, Yuma, AZ	Morrison, Lisa, Santa Cruz, CA
Beyea, Marsha, Santa Cruz, CA	O'Brian, Sandra, Felton, CA
Bloom, Jenica, Watsonville, CA	Ojie, Semla, San Diego, CA
Branson, Joshua, Santa Cruz, CA	Posner, Micah, Santa Cruz, CA
Cerza, Patrick, Watsonville, CA	Rees, Ruth S., Brookdale, CA
Click, Stuart, Santa Cruz, CA	Ruderman, Lily, Santa Cruz, CA
Dennis, Dusten, Santa Cruz, CA	Scott, Emily, Ardmore, PA
Derby, Kristin, Santa Cruz, CA	Sibley, Kevin, Boulder Creek, CA
Entropo, Maia, Santa Cruz, CA	Smith, Jeri Ann, Santa Cruz, CA
Fallon, Sharon, Santa Cruz, CA	Smith, Jesse, Santa Cruz, CA
Freeman, Susan, Santa Cruz, CA	Smith, Zach, Santa Cruz, CA
Garrett, Marilyn, Aptos, CA	Travis, Charles, Santa Cruz, CA
Gift, Joshua, Ben Lomond, CA	Wold, Eby, Big Sur, CA
Goodman, Judith, Santa Cruz, CA	Wylde, Gail, Santa Cruz, CA
Grace, Marie, Santa Cruz, CA	Wylde-Lalamm, Cordelia, Santa Cruz, CA
Granat, Robert, Boulder Creek, CA	Zarakov, Daniel, Los Gatos, CA
Hanson, Kendra, Capitola, CA	Zarakov, Eric, Los Gatos, CA
Israel, Carolyn, Santa Cruz, CA	Illegible last name, Anne Marie, Santa Cruz, CA
Jardine, Phyllis, Pleasanton, CA	Illegible last name, Sara, Santa Cruz, CA
Jorson, Jennifer, Santa Cruz, CA	Illegible last name, Scott, Duarte, CA
Kennedy, David, Foster City, CA	Illegible last name, Tony, Santa Cruz, CA
Kimel Family, Scotts Valley, CA	Illegible name, Aptos, CA
Maki, Linda, Menlo Park, CA	Illegible name, Los Gatos, CA

**TABLE 1.3–9.—Signatories to Campaign Postcard**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
Abranches, Johanna, Pleasanton, CA	Billan, Carrie, Livermore, CA
Akacich, Buddy, San Ramon, CA	Bishel, Helen, Colma, CA
Alavara, Rolad, Livermore, CA	Blair, Carolyn, Livermore, CA
Alexander, Mary, Livermore, CA	Blass, Lucille, Carmichael, CA
Allen, Elise R., Livermore, CA	Blijleur, Laura, San Francisco, CA
Allen, Jackey, Livermore, CA	Bloompoutener, Judith, Santa Cruz, CA
Allen, Jamie, La Honda, CA	Blue Ridge Environmental Defense League, Glendale Spring, NC
Allen, Kaleb C., Livermore, CA	Blushan, Illegible first name, Palo Alto, CA
Allen, Mary, Livermore, CA	Boeder, Denise, Livermore, CA
Alvarado, Emily, Oakland, CA	Boeder, Susan, Livermore, CA
Amezcuca, Josefina, Santa Cruz, CA	Borrough, D., Dublin, CA
Amiles, William, Philadelphia, PA	Bohn, Diana, Berkeley, CA
Anderson, Grant, Capitola, CA	Boldock, Barbara, Monterey, CA
Anderson, Lee, Oakland, CA	Bollock, Max and Margot, Belmont, CA
Anderson, Shante	Bolnett, Eric, Santa Cruz, CA
Andrews, Evelyn, Frackville, PA	Bosinger, Jean, Des Moines, IN
Angelo, Renafel, Livermore, CA	Bouscal, L.
Anzelmo, Gene, Santa Cruz, CA	Bowman, Connie, Sacramento, CA
Ardez, Marta, Livermore, CA	Bowman, Margaret, Piedmont, CA
Ardraghetto, Anne, Sacramento, CA	Brady, Susan, San Francisco, CA
Arnold, Janet S., Oakland, CA	Branchaud, Tone, Livermore, CA
Arreaga, Daurina R., Stockton, CA	Brant, Illegible first name, Pittsburg, CA
Atkinson, Carol, Livermore, CA	Braunstein, Lina, Petaluma, CA
B., Karen, Fairfax, CA	Breen, Barbara, Livermore, CA
Bailey, Jo Ann, Livermore, CA	Brennan, G., Livermore, CA
Bair, Barbara, Altadena, CA	Bressler, Jen, San Francisco, CA
Bajas, Pat	Brown, Alden
Balls, Deborah, San Francisco, CA	Brown, Elizabeth, Kensington, CA
Balto, Odena, Oakland, CA	Brown, Julie M., Surfside, FL
Bannah, Margaret	Brunner, Eva, Santa Cruz, CA
Bannister, Kashia, Livermore, CA	Bucher, Anne Symens, Oakland, CA
Barbero, Joan, Livermore, CA	Buck, Constance, Portland, OR
Barker, Jean E., Santa Rosa, CA	Buckley, Chris, San Francisco, CA
Barn, Troy, Petaluma, CA	Buell, John, Sunnyvale, CA
Barnes, Kathryn	Bullute, M., Dublin, CA
Barnhill, Susan, Sacramento, CA	Buntz, David, Calistoga, CA
Bate, Charles, Berkeley, CA	Burkhardt, Leonard B.
Beann, Maria, Pacifica, CA	Burks, Paul, Santa Rosa, CA
Bell, Daphae L., Berkeley, CA	Burnes, Marilyn, Palo Alto, CA
Bell, Rose, Grass Valley, CA	Burnt, Slone, Livermore, CA
Bellins, Jesse, Livermore, CA	Busher, Catherine
Bennell, Laura, Livermore, CA	Byrd, Brenda, Livermore, CA
Bennett, Taylor, Berkeley, CA	Cadotte, Blanche E., Patterson, CA
Bennett, Winifred B., Santa Barbara, CA	Cadwilader, Barbara, Oakland, CA
Best, Michele, Pleasanton, CA	Calval, Renee, Livermore, CA
Bettencourt, R. B., Livermore, CA	Candell, C., Berkeley, CA
Betts, Rick, Sacramento, CA	Canham, Mary P., Oakland, CA
Berger, Rose, R., Berkeley, CA	Canto, Illegible first name, Livermore, CA
Berman, M., Pleasanton, CA	Carey, Mary Lou, Oakland, CA
Bernardi, Gene, Berkeley, CA	Carmen, Marg, Livermore, CA
Beville, Frank and Sherry, Oakland, CA	Carmino, Illegible first name, San Francisco, CA
Bidori, Juliette A., Berkeley, CA	

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
Carreau, Lucille, Patterson, CA	DeBellis, Tony, Danville, CA
Casey, Donald, Henderson, NV	DeCaer, Shirley, Livermore, CA
Castillo, Paul, Livermore, CA	DeJaegher, Veronique, San Geronimo, CA
Cassell, Marie, Livermore, CA	Delanohue, Eddie, Carmichael, CA
Cato, Alice, Santa Cruz, CA	DeLauer, Betty, El Sobrante, CA
Catz, Randall, Livermore, CA	DeLauer, Mary Lou, Oakland, CA
Cavalieri, Athena, Livermore, CA	Deleon, R., Tracy, CA
Cavalieri, Lida, Livermore, CA	Delgado, Maria I., Tracy, CA
Cawytrell, Illegible first name, San Francisco, CA	Deluvartz, Martha, Soquel, CA
Charger, Joyce L., Lincoln, CA	Denardo, Dana D., Livermore, CA
Chew, Thomas, J., Livermore, CA	Desrosei, Victoria, Livermore, CA
Chopman, Adrian	Diagonal, Martha
Chong, Quck, Livermore, CA	Diaz, Joey, El Cerrito, CA
Christensen, Dorothy, Vallejo, CA	Diel, Chloe, Livermore, CA
Churchill, Julianne, Livermore, CA	Dieraf, Edward, San Francisco, CA
Churna, Jill, Soquel, CA	Dishong, Ellen, Livermore, CA
Clark, Elaine, Stockton, CA	Domsiz, Connie, Livermore, CA
Clark, Sue, San Francisco, CA	Dorabji, Tara, Livermore, CA
Clavell, Lou, Livermore, CA	Dorais, Jason, Pleasant Hill, CA
Cleland, Robert A., Wilmette, IL	Dotsen, Janette D., Oakland, CA
Coates, Helen T., Altadena, CA	Draske, Karen A., Pleasanton, CA
Cobase, Maria, Livermore, CA	Duddie, Kay, Livermore, CA
Colbert, Mary K., Pleasanton, CA	DuPrau, Dolly, Palo Alto, CA
Conable, Sherry, Santa Cruz, CA	Echerisna, P., San Francisco, CA
Connell, Pat, Livermore, CA	Edelman, Ann and Richard, Los Angeles, CA
Connor, Illegible first name, Livermore, CA	Edy, MacGreger, Salinas, CA
Contreras, Mauricie, Berkeley, CA	Eicher, Carol Ann, Livermore, CA
Cook, Cati, Nevada City, CA	Eisman, Beatrice, San Francisco, CA
Cooper, Debbie, Livermore, CA	Ellis, S., San Francisco, CA
Copeland, Paul, Ashland, OR	Emshoff, Jeff, Felton, CA
Copeland, Salina, Mountain View, CA	Engel, Vicki, San Francisco, CA
Cordtz, M., Pleasanton, CA	Enger, Barbara, San Ramon, CA
Cornwell, K., Davis, CA	Eniti, Barbara, H., Livermore, CA
Corts, Katherine G., Livermore, CA	Ericson, Stephanie, Dublin, CA
Cox, Alice, Morgan Hill, CA	Fanslow, Barbara J., Sebastopol, CA
Creamer, David, Nevada City, CA	Favor, Rev. Judith L., Claremont, CA
Cross, Carol, Redwood City, CA	Feldman, Ruth, Alamo, CA
Crowder, Carol, Livermore, CA	Feliz, Donald, Sacramento, CA
Crumpley, F. and E., Oakland, CA	Fels, Harrison, Grass Valley, CA
Cruser, Richard, B., Walnut Creek, CA	Fely, Elsie P., Sacramento, CA
Cuddy, Gayle, Livermore, CA	Fendell, Corinne, San Francisco, CA
Cunningham, Ellen M., Fremont, CA	Fernandez, Luz, Livermore, CA
D., Katie, Livermore, CA	Fine, S., Fremont, CA
D'Amore, Shelley, Santa Cruz, CA	Finkel, Star, Pleasanton, CA
Dabresin, Karen, Berkeley, CA	Fisher, Camille, Livermore, CA
Dagle, C., Livermore, CA	Fisher, Lorito, Monterey, CA
Dain, Ra, Belmont, CA	Fisher, Dr. and Mrs. A.A., Los Altos, CA
Davey, Ronald, San Francisco, CA	Fornnery, April, Whitmore, CA
Davidson, Karen, Grass Valley, CA	Forsyth, James, Hayward, CA
Davidson, Sandra, Oakland, CA	Foster, Abby, San Jose, CA
Day, Charlotte, Livermore, CA	Freemire, Michael, North Fork, CA
Dean, Glenn A., Livermore, CA	Freemott, George, Inverness, CA

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
Friscek, Jo Anne, Livermore, CA	Hay, Steve, Livermore, CA
Fritter, Michael	Hayworth, Sean, Livermore, CA
Fromstad, Nita, Sacramento, CA	Heaze, Claire, Pleasanton, CA
Fuller, Carol, Santa Cruz, CA	Heilburn, S., Grass Valley, CA
Fuller, DC, Livermore, CA	Helton, Ray, Laytonville, CA
Fuller, Robert R., Livermore, CA	Hendricks, Patricia, San Francisco, CA
Fuller, Staci, Livermore, CA	Henry, Edith, Duante, CA
G., Carolyn, Santa Cruz, CA	Hensley, Lisa, Livermore, CA
Ga, Linda, Livermore, CA	Heusingkueld, Dana, Livermore, CA
Garcia, Jose, San Francisco, CA	Hill, Illegible first name, Newport Beach, CA
Genet, Joanne B., Lafayette, CA	Hilliand, Tim, Livermore, CA
George, C., Livermore, CA	Him, Alex, San Francisco, CA
George, Valori, Pacific Grove, CA	Hindurash, Levan, Livermore, CA
Gilday, Erin, Santa Cruz, CA	Hobson, John, Livermore, CA
Glick, David, Fairfax, CA	Holman, Betsy, Fremont, CA
Goff, Natalie, Santa Cruz, CA	Holman, Edward, Fremont, CA
Gonsales, Dora, Walnut Creek, CA	Hoon, Daryl, Livermore, CA
Gordon, Gene, Walnut Creek, CA	Hope, Brandon, Sacramento, CA
Gordon, K., Littleton, CO	Hopkins, Susan, D., Nevada City, CA
Goudreau, Pamela, Livermore, CA	Hopper, Marilyn J., Lafayette, CA
Gray Panthers, Sacramento, CA	Hostetter, Marandi, Santa Cruz, CA
Green, Charles, Walnut Creek, CA	Houd, Rebecca, San Francisco, CA
Greenman, Jessea, Oakland, CA	Houston, Betty, Davis, CA
Gershenberg, Amy, Berkeley, CA	Houston, Robin, Davis, CA
Gholami, Saeed, Livermore, CA	Howard, Justin, Soquel, CA
Gilmore, Virginia, Salinas, CA	Howe, Julianne M., Fremont, CA
Ginnis, Bonnie, Soquel, CA	Hub, Mark, Pleasanton, CA
Grah, Mary B., Orinda, CA	Hubbard, Susan, Marina, CA
Graje, Kim, Livermore, CA	Hudson, Bonnie, Ben Lomond, CA
Grant, Marian, Santa Cruz, CA	Hunter, Ruth, Santa Cruz, CA
Gregg, Abbie, Livermore, CA	Irvine, Marion, San Rafael, CA
Griffin, Rebecca, Berkeley, CA	Isel, Jack, Sacramento, CA
Gump, Joseph, Bloomington, MI	Islen, D.B., Albany, CA
Gupta, AK, Dublin, CA	Jackman, Jean, Davis, CA
Guth, Virginia, San Francisco, CA	Jacobs, Margaret
Gutierrez, Maria, Livermore, CA	James, Helen, Pacifica, CA
Haas, Adriane P., Livermore, CA	Jandine, A., Kensington, CA
Hain, Liana, Santa Cruz, CA	Janets, Mark, San Francisco, CA
Hale, E. Janet, Palo Alto, CA	Jaynes, Amy, Sacramento, CA
Ham, Christine L., Livermore, CA	Jaynes, Phil, Sacramento, CA
Hamburger, Naomi, Davis, CA	Johansen, P., Livermore, CA
Hamilton, Gilbert, Davis, CA	Johnson, Beverly, San Leandro, CA
Hannugnut, Joe, Santa Rosa, CA	Johnston, Victoria, Livermore, CA
Harrob, Deborah, Livermore, CA	Jones, Charlie, Sacramento, CA
Harrison, David, San Francisco, CA	Jones, Elizabeth Israel, Santa Rosa, CA
Harrison, Norma, Berkeley, CA	Jones, Robert
Haut, Paul, Santa Cruz, CA	

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
Jones, Teri, Eugene, OR	Lin, Illegible first name, San Francisco, CA
Jong, A., Cambridge, UK	Lin, Illegible first name, Soquel, CA
Jorgensen, Nan E.W., Pacific Grove, CA	Lindeman, William, San Geronimo, CA
K., Allen, Concord, CA	Lista, Cassandra B., Santa Rosa, CA
Kaiser, Kimberly, Livermore, CA	Litton, Kathryn, Nevada City, CA
Kanori, Illegible first name, Oakland, CA	Lockett, Melvin, Berkeley, CA
Karas, Judith, Monterey, CA	Logan, Yvonne, St. Louis, MO
Karter, Chris, San Francisco, CA	Loges, John, Concord, CA
Keene, Stephanie, Watsonville, CA	Lopez, Lolita, Livermore, CA
Kelion, Dorothy, Pasadena, CA	Lorain, Mary, Berkeley, CA
Kellerband, Anne, Pleasanton, CA	Love, Rachelle, Livermore, CA
Kelley, JDS, Livermore, CA	Lubun, Summer, Berkeley, CA
Kelley, Marylia, Livermore, CA	Lucas, D.C., San Francisco, CA
Kelly, Stephen, Oakland, CA	Luna, Elizabeth, Stockton, CA
Kerr, Kim, Livermore, CA	Lund, James, Livermore, CA
Keila, Suzanne, Palo Alto, CA	Lund, Illegible first name, Livermore, CA
Keuicu, Illegible first name, Pleasanton, CA	Luong, Anna, Berkeley, CA
Kiesak, George W., San Francisco, CA	Lutton, Kevyn, San Francisco, CA
Kilchenman, Candace, Berkeley, CA	Lynch, Louise, Fremont, CA
Kilebrew, Martha, Oakland, CA	MacKnight, Maria, Livermore, CA
Killman, Lisa, San Francisco, CA	MacLain, Sarah, Livermore, CA
Kim, Mary, Berkeley, CA	Maechtlen, Katie, El Monte, CA
Kim, Toni, Novato, CA	Mahoney, Chris, Livermore, CA
King, Emily, Mountain View, CA	Mahoney, S., Livermore, CA
King, J., Livermore, CA	Major, Diane, Livermore, CA
King, James, Livermore, CA	Makyeae, Monique, Livermore, CA
Kioll, Wendy Jo, Santa Cruz, CA	Malato, Livermore, CA
Kluonder, Rhonda, Modesto, CA	Malone, Sean, Santa Clara, CA
Koch, Sandy, Livermore, CA	Manning, Stephanie, Berkeley, CA
Kohl, Illegible first name, Sacramento, CA	Mark, Heather
Kosman, Alicia, Santa Cruz, CA	Martin, Cheryl, Livermore, CA
Kostoff, John, Soquel, CA	Martin, Willard, San Francisco, CA
Kueyayul, M., Berkeley, CA	Martinez, Antonio, Livermore, CA
LaFond, Victoria, Berkeley, CA	Martinez, Oakland, CA
Landis, James, Mariposa, CA	Matt, N.
Lang, Lola, Sacramento, CA	Mattern, Rodger, Livermore, CA
Langren, Andrea, Santa Cruz, CA	Mattern, Sarah
Langhom, Sarah, Aptos, CA	Mattern, Sharon, Livermore, CA
Lanier, Jody, Savannah, GA	Matthews, Illegible first name, Pleasanton, CA
Larry, Debra	Matthews, H. Marie
Lau, Kelly, Livermore, CA	Maubna, Eveline, Livermore, CA
Laurel, Steph, Santa Cruz, CA	Mauk, Allyson, Pebble Beach, CA
Lauretta, Vickie, Pittsburg, CA	Mazzamuto, Julie
Lawson, Sean, San Francisco, CA	Meinze, Ailene
Lee, Turin, Livermore, CA	Medina, Edwina, Livermore, CA
Lemba, Janet S., Monterey, CA	McAlundes, Sheila, Castro Valley, CA
Leonard, A., Berkeley, CA	McAnoney, Maggie, Sacramento, CA
Levick, Paula, Stockton, CA	McCauley, Miguel, Livermore, CA
Levine, Jane, Walnut Creek, CA	McDermott, Lila, Santa Rosa, CA
Lewis, Emily, Watsonville, CA	McDonald, Susan, Carmel Valley, CA
Liebman, Matthew	McFadden, Jean W.
Luma, Diane, Livermore, CA	McInteer, Jonathan, Redding, CA

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
McKay, Dana, San Ramos, CA	Parker, Jean, Livermore, CA
McKinne, Jane, Berkeley, CA	Parly, Beverely, Livermore, CA
McWalters, Ann V., Oakland, CA	Paroman, Arnold, Berkeley, CA
McWell, J., Berkeley, CA	Pasqualini, C., San Francisco, CA
McWeyiel, Howard, Berkeley, CA	Patel, Jita, San Francisco, CA
Melt, Karedeen, Davis, CA	Patel, Ropal, Livermore, CA
Menge, Virginia, Canyon, CA	Payne, Jewel, Davis, CA
Michael, Cecilia, San Francisco, CA	Pearce, Marilyn, Fair Oaks, CA
Michaud, Imeldo, Patterson, CA	Perees, Sheri, Lafayette, CA
Miller, Estelle, Livermore, CA	Perez, Amy, Pittsberg, CA
Minkler, D., Berkeley, CA	Perez, Suzanne
Moffe, Linda, Sunol, CA	Perner, Mary, Livermore, CA
Moffett Hall, Mike L., Albany, CA	Perry, Bethany, Livermore, CA
Moffett, Patricia, Livermore, CA	Perry, Diana P., Berkeley, CA
Moore, Carmela, San Francisco, CA	Peterson, Gary, Santa Cruz, CA
Moore, Sue, San Francisco, CA	Peterson, Jean Marie, Santa Cruz, CA
Morgan, Stephen, Livermore, CA	Peterson, Terry N., Livermore, CA
Morris, Joyce O., Davis, CA	Pettit, Andrea, Pleasanton, CA
Moser, Thomas, Berkeley, CA	Pham, Joy, Livermore, CA
Muger, Avis, Oakland, CA	Phillips, Jeff, Los Banos, CA
Murphy, Leona	Piraim, Jean, Royal Oaks, CA
Murphy, Michael, Livermore, CA	Platt, Elisabeth, Livermore, CA
Myer, O.J.	Poole, Edy, Sacramento, CA
Nara, Rachael, Santa Clara, CA	Priebat, Martha, Pleasanton, CA
Narman, Bethe and Fred, Pleasanton, CA	Preciads, Susan, Watsonville, CA
Navarro, Hilda, Livermore, CA	Preston, Jayne A., San Francisco, CA
Neblett, Pam, San Francisco, CA	Price, C., Los Gatos, CA
Nelson, Brian, El Cerrito, CA	Prode, Kathy, Pleasanton, CA
Nelson, E., Livermore, CA	Purcell, Gloria R., Livermore, CA
Nelson, Frank, San Francisco, CA	Quinn, Dejonghe, Pleasanton, CA
Nemett, Teresa, Berkeley, CA	Ranta, Nell, Elk Grove, CA
Nesmith, David, Oakland, CA	Rasure, Ron, Berkeley, CA
Nickl, Ally, Santa Cruz, CA	Raymond, Bethany, Dublin, CA
Nikolaus, Ana, San Jose, CA	Razari, Layla, San Diego, CA
Nolan, Lynn, Livermore, CA	Rea, Phil, Concord, CA
Nolan, William, Browns Valley, CA	Reed, Dorothey, Fairfax, CA
Nolet, Lee, Loma Rica, CA	Rents, Scott
O'Connor, Bridget, Sacramento, CA	Rents, Tanya, Grass Valley, CA
Odell, A., Berkeley, CA	Reed, Dorothy, Fairfax, CA
Olson, Patricia A., Livermore, CA	Reed, Gloria, Soquel, CA
Ongaim, Jeremy, San Francisco, CA	Reese, Dan, San Francisco, CA
Orloff, Paula and Jerome, Nevada City, CA	Reil, D.
Ormond, Elizabeth K., Grass Valley, CA	Reiler, Lorraine, Nevada City, CA
Orser, Robert D., Oakland, CA	Renard, Helene, Livermore, CA
Ortner, Mary, Livermore, CA	Rezlan, Scott
Owens, Carly C., Alamo, CA	Rigley, Buton J., Castro Valley, CA
Padgett, Mavis E.	Rigley, June, Castro Valley, CA
Page, Illegible first name	Risdon, Glen A., San Francisco, CA
Paige, Theo, Santa Cruz, CA	Ritch, Kim, Livermore, CA
Pallas, Amy, San Francisco, CA	Roberts, Hilda, Berkeley, CA
Palley, May K., Nevada City, CA	Roberts, Linda E., Sacramento, CA
Pargett, Mary Anne, Fremont, CA	Robertson, Duane, Orangevals, CA

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
Robertson, Ian Baron, Walnut Creek, CA	Smith, Edward, San Francisco, CA
Robertson, Isabella, Orangevale, CA	Smith, Glen, Livermore, CA
Robertson, Marilyn, Felton, CA	Smith, JC, Pleasanton, CA
Robertson, Wendy, Castro Valley, CA	Snyder, Dona, Auburn, CA
Robinson, Linda, Livermore, CA	Soluaf, Claire, Santa Cruz, CA
Robinson, N., Livermore, CA	Sonnenburg, Sonja, San Francisco, CA
Robles, Maria, Livermore, CA	Sorie, Michelle Carier
Robuso, Susie, Livermore, CA	Spake, Anne and Gene, Mill Valley, CA
Rocchio, Judith, Menlo Park, CA	Spatz, Midgene, Las Vegas, NV
Rodriguez, Dolores, Richmond, CA	Specht, Mary, Livermore, CA
Romano, Debbie, Livermore, CA	Sprivell, Kelly, Livermore, CA
Rooney, Julie, Pleasanton, CA	Stand, Christi, Paris, TX
Rose, Illegible first name, Hollywood, CA	Stark, F., Livermore, CA
Rosenthal, Michael, Fairfax, CA	Statt, Jeanmarie, San Leandro, CA
Ruxroth, Ella C., Livermore, CA	Steadman, Gregg, Santa Rose, CA
Ryan, Amanda, Livermore, CA	Steely, R., Hayward, CA
Saldare, Josh, El Monte, CA	Steinberg, Susan, Livermore, CA
Saltzen, Jean, Yreka, CA	Stevenson, Maria, Davis, CA
Salim, A., San Francisco, CA	Stoffer, Karl E., Sacramento, CA
Salinas, Mauricio, San Jose, CA	Stone, Holly, Aptos, CA
Salo, Lois, Palo Alto, CA	Streim, Lori, Santa Cruz, CA
Samford, Craig, Albany, CA	Stroud, Linda, Livermore, CA
Sanchez, Jose, Livermore, CA	Surra, Marvel, Stockton, CA
Sanger, Calanit, Berkeley, CA	Surra, Mary C., Stockton, CA
Sandberg, Louise, Corinth, VT	Suton, C., Santa Cruz, CA
Sanford, Doris, Sacramento, CA	Swan, June, Corte Madera, CA
Sanford, James, Sacramento, CA	Swat, Dr. Bill M., Walnut Creek, CA
Scaff, Lloyd and Beverly, Walnut Creek, CA	Swenson, Adrienne, Santa Rosa, CA
Scails, Esther, Santa Cruz, CA	Taeger, Frances, Davis, CA
Scarborough, Doris, Berkeley, CA	Tarricong, Jason, Palo Alto, CA
Schleis, August, Berkeley, CA	Taylor, Kimberly, Aptos, CA
Schleis, Samantha, Berkeley, CA	Terrazas, Laura, Soquel, CA
Schleis, Tom, Berkeley, CA	Thomas, Dennis, Pleasant Hill, CA
Schmidt, Anthony, Sacramento, CA	Thompson, Deanne, Sebastopol, CA
Schmidt, Caroline, Sacramento, CA	Thurace, Chris, San Fransicso, CA
Schultz, Amy F., Oakland, CA	Tilleman, Anna, Livermore, CA
Schultz, Jeffrey, Gualala, CA	Todd, John, Livermore, CA
Schust, James, Livermore, CA	Toscano, Dolores, Livermore, CA
Schwartz, Daniel, Santa Cruz, CA	Toupadakis, Barbara, Woodland, CA
Seguhamm, Christine, Palo Alto, CA	Trice, Jr., Billy, Oakland, CA
Sekara, Illegible first name, San Francisco, CA	Tsutsui, M., Stockton, CA
Serrano, R.C., Santa Cruz, CA	Turner, Chris
Shaw, K., Pleasanton, CA	Tyndall, Margaret, Oakland, CA
Shere, Lindsey, Healdsburg, CA	Umble, Ethel K., Goshen, IN
Sherman, Alan, and Illegible last name, Mary Jane, Paso Robles, CA	Vahidi, Katrina, Berkeley, CA
Shila, Sylvia, Salinas, CA	Valleley, Judith, Sacramento, CA
Sibourn, Dorothy, Livermore, CA	Van Artes, K.L., Oakland, CA
Silva, Helen, Livermore, CA	Vandevese, Joyce K., Monterey, CA
Silva, William, Livermore, CA	Vanderloo, Margaret, Sacramento, CA
Smart, Jean E., Oakland, CA	Vasconte, Eve, San Mateo, CA
Smick, Kathryn, Lafayette, CA	Vayne, Kim, Oakland, CA
	Venet, Lisa, Livermore, CA

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
Venet, Philippe, Livermore, CA	Wilson, Rachel, Berkeley, CA
Velle, Karen, San Francisco, CA	Wilson, S., Bellevue, WA
Vick, Jennifer, Livermore, CA	Winter, Barbara, Livermore, CA
Villasenor, Cathryn, Castro Valley, CA	Winwood, Joya, Santa Cruz, CA
Villy, Leanne, Berkeley, CA	Witer, Annie, Berkeley, CA
Vittitow, Marion, Santa Cruz, CA	Wolfe, Heather, Livermore, CA
Vittitow, Richard L., Santa Cruz, CA	Wolfe, Nany Louise, Santa Cruz, CA
Vurick, Jennifer O., Tecopa, CA	Wood, Alice, Livermore, CA
W.A., Kurt, Livermore, CA	Wood, Chloe, Central Point, OR
Wagner, Illegible first name, San Francisco, CA	Wooly, Jennie, San Francisco, CA
Wain, David, Livermore, CA	Worth, Darby Moss, Carmel, CA
Walker, G., Livermore, CA	Wright, Paul, Santa Cruz, CA
Walker, Kevin, Pleasanton, CA	Wynne, Pat, Grass Valley, CA
Waller, Rebecca, Pleasanton, CA	Yadon, Carol, Livermore, CA
Walters, Linda, Livermore, CA	Yial, Felicia, J., Livermore, CA
Wanka, Jie M., Livermore, CA	Z., Krista, Livermore, CA
Warauuff, Katrine, Davis, CA	Zahn, Barbara E., Pasadena, CA
Warrive, Kristie, Sacramento, CA	Zengel, P., Pleasanton, CA
Wathen, Stephen, Davis, CA	Zimmerman, Bob, Concord, CA
Weber, Dena, Pacific Grove, CA	Zimmerman, Dustin, Santa Cruz, CA
Weber, J. Martin, Sacramento, CA	Zobreskie, Carmen, Livermore, CA
Weil, Janet, San Francisco, CA	Illegible name, Alamo, CA
Weimer, Abby, Santa Cruz, CA	4 Illegible names, Aptos, CA
Weimer, Nicole, Aptos, CA	Illegible name, Ashland, OR
Weis, Betty, Los Gatos, CA	Illegible name, Bayside, CA
Weiss, Steve	10 Illegible names, Berkeley, CA
Weinland, Sally S., Carmichael, CA	Illegible name, Bolivas, CA
Welton, Jack P., Las Vegas, NV	3 Illegible names, Boulder Creek, CA
Wenninger, Janet E., Oakland, CA	Illegible name, Brentwood, CA
Wernhand, Sally S., Carmichael, CA	Illegible name, Browns Valley, CA
Werz, Diane, Santa Cruz, CA	Illegible name, Burbank, CA
Werz, Rhonda, Livermore, CA	Illegible name, Carmel, CA
Wesephal, Sheila L., San Ramon, CA	Illegible name, Ceritos, CA
Wesley, Laurie, Berkeley, CA	Illegible name, Davenport, CA
West, Ryan, Livermore, CA	4 Illegible names, Davis, CA
Westerbrook, Diane, Pleasanton, CA	11 Illegible names, Dublin, CA
Westerguard, Joyce, Sacramento, CA	2 Illegible names, El Cerrito, CA
Wetthall, Earl, Pleasanton, CA	5 Illegible names, Fairfax, CA
White, Arnie, Berkeley, CA	3 Illegible names, Fair Oaks, CA
Whitney, Shirley, Sacramento, CA	2 Illegible names, Felton, CA
Wiebe, Helena, Pasadena, CA	Illegible name, Freedom, CA
Wieland, Barb, Martinez, CA	Illegible name, Fremont, CA
Wilcox, Wandis, Santa Cruz, CA	Illegible name, Lincoln, CA
Wiley, Illegible first name, San Francisco, CA	44 Illegible names, Livermore, CA
Williams, D., Livermore, CA	Illegible name, Los Altos, CA
Williams, Leslie, Livermore, CA	Illegible name, Los Angeles, CA
Williams, Patricia, Davis, CA	Illegible name, Manteca, CA
Williams, Sally L., Oakland, CA	Illegible name, Marina, CA
Willis, Juli, Livermore, CA	Illegible name, Martinez, CA
Willis, Stacey, Livermore, CA	Illegible name, Modesto, CA
Willis, Stephanie, Livermore, CA	Illegible name, Mountain View, CA
Wilson, Kathleen, Livermore, CA	4 Illegible names, Nevada City, CA

**TABLE 1.3–9.—Signatories to Campaign Postcard (continued)**

<b>List of Signatories – Campaign Postcard (Sample Document Page Number 2-268)</b>	
10 Illegible names, Oakland, CA	Illegible last name, Gavin, Los Angeles, CA
Illegible name, Orlando, FL	Illegible last name, H., San Francisco, CA
Illegible name, Pacific Grove, CA	Illegible last name, Howard, San Francisco, CA
2 Illegible names, Pacifica, CA	Illegible last name, J.S., Fairfax, CA
2 Illegible names, Palo Alto, CA	Illegible last name, Jacqueline, Santa Clara, CA
Illegible name, Pasadena, CA	Illegible last name, Jamie, Hayward, CA
Illegible name, Pebble Beach, CA	Illegible last name, Joan, Martinez, CA
2 Illegible names, Pittsburg, CA	Illegible last name, Jodi, Penn Valley, CA
4 Illegible names, Pleasanton, CA	Illegible last name, Judith, Oakland, CA
Illegible name, Providence, CA	Illegible last name, Kathryn, Pleasanton, CA
Illegible name, Redwood City, CA	Illegible last name, Katie, Livermore, CA
Illegible name, Reno, NV	Illegible last name, Kylie, Livermore, CA
Illegible name, Riverbank, CA	Illegible last name, Laura, Fairfax, CA
2 Illegible names, Sacramento, CA	Illegible last name, Laura, Oakland, CA
39 Illegible names, San Francisco, CA	Illegible last name, Linda, Livermore, CA
2 Illegible names, San Geronimo, CA	Illegible last name, Lindsay, San Francisco, CA
Illegible name, Santa Clara, CA	Illegible last name, Luana, Martinez, CA
28 Illegible names, Santa Cruz, CA	Illegible last name, Matt, Pleasanton, CA
3 Illegible names, San Jose, CA	Illegible last name, Max, Oakland, CA
Illegible name, San Pablo	Illegible last name, Megan, Carmichael, CA
Illegible name, San Ramos, CA	Illegible last name, Michelle, Oakland, CA
2 Illegible names, Saratoga, CA	Illegible last name, Miguel, Pittsburg, CA
2 Illegible names, Scott’s Valley, CA	Illegible last name, Natalie, Santa Cruz, CA
Illegible name, Soquel, CA	Illegible last name, Paula, Santa Cruz, CA
Illegible name, Venice, CA	Illegible last name, Rachael, Oakland, CA
2 Illegible names, Walnut Creek, CA	Illegible last name, Richelln, Berkeley, CA
4 Illegible names, Watsonville, CA	Illegible last name, Robert, Livermore, CA
2 Illegible names, Washington, DC	Illegible last name, Robert, Felton, CA
Illegible last name, A., Dublin, CA	Illegible last name, Russell
Illegible last name, Akbar, Tracy, CA	Illegible last name, Sandra
Illegible last name, Alexandre, Los Gatos, CA	Illegible last name, Sarah, Richmond, CA
Illegible last name, Bruce, Modesto, CA	Illegible last name, Sheldon, Cotati, CA
Illegible last name, Christopher, Davis, CA	Illegible last name, Sherry, Santa Cruz, CA
Illegible last name, Curtiz, San Francisco, CA	Illegible last name, Teresa, San Ramon, CA
Illegible last name, Dan, Santa Cruz, CA	Illegible last name, Tim, El Cerrito, CA
Illegible last name, David, Santa Cruz, CA	Illegible last name, Donna, Berkeley, CA
Illegible last name, David, Livermore, CA	Illegible last name, Shula, San Anselmo, CA
Illegible last name, Dylan, Fairfax, CA	18 Illegible names
Illegible last name, Eleanor, San Francisco, CA	1 Unsigned
Illegible last name, Ernest, Pittsburg, CA	

**TABLE 1.3–10.—Index of Commentors, Multiple Signatory Documents**

Commentor Information	Document Page Number
<b>Multiple Signatory Letter 1</b> Brown, Carol Marie Carrigan, Marleen H. Conant, Mary J. Cunningham, Ellen, M Garrison, Judy Jennena Hewelcke, Ruth E. Koscieliki, Eleanor A. Rielly, Catherine D. Sister Smith, Jean Matthew Soboron, Cecilia Vegas, Lucille A. Walsh, Patricia M.	2-213
<b>Multiple Signatory Letter 2</b> Arends, Joni Cabasso, Jacqueline Carpenter, Tom Clements, Tom Coghlan, Jay D'Arrigo, Diane Deitweiler, Winnie Gould, Robert M., MD Hutchinson, Ralph Johnson, Peggy Maze Kelley, Marylia Krofchok, Lorraine Lee, Joan B. Leventhal, Paul Maxand, Jeremy Musil, Robert K., Ph.D, MPH Paine, Christopher Schwartz, Sandra Sihvola, Pamela Williams, Jane Zeller, Louis	2-214
<b>Multiple Signatory Letter 3</b> Mary Virginia Leoch Kathleen McAvay Cecilia Schoenstein	2-215
<b>Multiple Signatory Letter 4</b> Betty Brown Dale Nesbitt Rita B. Perry Dolores Rodriquez	2-216

**TABLE 1.3–11.—Comments Sorted by Summary Code**

Summary Code	Summary Page No.	Document Page No.
<b>Policy</b>		
01.01	3-1	2-11, 2-14, 2-15, 2-26, 2-29, 2-31, 2-37, 2-52, 2-53, 2-54, 2-55, 2-63, 2-65, 2-66, 2-69, 2-74, 2-76, 2-77, 2-81, 2-84, 2-86, 2-87, 2-96, 2-99, 2-100, 2-102, 2-105, 2-107, 2-110, 2-111, 2-113, 2-114, 2-128, 2-129, 2-151, 2-153, 2-158, 2-160, 2-161, 2-163, 2-165, 2-169, 2-170, 2-171, 2-174, 2-175, 2-177, 2-180, 2-181, 2-186, 2-200, 2-209, 2-216, 2-217, 2-222, 2-223, 2-224, 2-225, 2-229, 2-234, 2-238, 2-239, 2-240, 2-241, 2-246, 2-248, 2-251, 2-253, 2-254, 2-258, 2-260, 2-263, 2-266, 2-268, 2-277, 2-278, 2-279, 2-280, 2-283, 2-288, 2-289, 2-294, 2-295, 2-296, 2-300, 2-301, 2-305, 2-325, 2-339, 2-347, 2-348, 2-352, 2-359, 2-360, 2-362, 2-364, 2-368, 2-373, 2-380, 2-381, 2-387, 2-388, 2-390, 2-398, 2-402, 2-403, 2-409, 2-417, 2-423, 2-437, 2-442, 2-452, 2-453, 2-456, 2-457, 2-458, 2-459, 2-463, 2-464, 2-468, 2-470, 2-481, 2-489, 2-497, 2-500, 2-503, 2-504, 2-506, 2-511, 2-513, 2-514, 2-523, 2-524, 2-533, 2-535, 2-538, 5-540, 2-545, 2-546, 2-547, 2-576, 2-583, 2-584, 2-586, 2-589, 2-591
01.02	3-3	2-18, 2-114, 2-116, 2-129, 2-130, 2-159, 2-162, 2-285, 2-514, 2-538, 2-540, 2-541, 2-542, 2-583
01.03	3-3	2-11, 2-161, 2-173, 2-221, 2-324, 2-248, 2-252, 2-324, 2-386, 2-443, 2-467, 2-478, 2-506
<b>Programmatic Response and Need</b>		
02.01	3-4	2-14, 2-18, 2-25, 2-27, 2-29, 2-33, 2-35, 2-36, 2-37, 2-55, 2-60, 2-66, 2-81, 2-88, 2-92, 2-94, 2-102, 2-105, 2-110, 2-111, 2-113, 2-117, 2-153, 2-156, 2-157, 2-158, 2-166, 2-168, 2-173, 2-174, 2-175, 2-178, 2-182, 2-195, 2-197, 2-200, 2-201, 2-209, 2-210, 2-219, 2-221, 2-222, 2-235, 2-247, 2-248, 2-251, 2-253, 2-255, 2-258, 2-273, 2-274, 2-280, 2-281, 2-295, 2-297, 2-303, 2-305, 2-314, 2-315, 2-316, 2-318, 2-321, 2-322, 2-338, 2-346, 2-349, 2-350, 2-352, 2-388, 2-395, 2-396, 2-410, 2-419, 2-420, 2-421, 2-423, 2-441, 2-443, 2-458, 2-459, 2-461, 2-463, 2-464, 2-466, 2-467, 2-470, 2-475, 2-477, 2-478, 2-479, 2-486, 2-491, 2-492, 2-494, 2-497, 2-502, 2-511, 2-525, 2-532, 2-533, 2-546, 2-563, 2-577, 2-578, 2-579, 2-585, 2-590, 2-592, 2-595
02.02	3-5	2-25, 2-540, 2-541, 2-581
<b>Cost and Schedule</b>		
03.01	3-5	2-14, 2-53, 2-69, 2-99, 2-157, 2-176, 2-179, 2-213, 2-215, 2-252, 2-353, 2-359, 2-360, 2-361, 2-375, 2-406, 2-418, 2-419, 2-430, 2-440, 2-442, 2-471, 2-478, 2-489, 2-511, 2-577
03.02	3-6	2-84, 2-402, 2-403

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>Proposed Action</b>		
04.01	3-6	2-13, 2-14, 2-15, 2-20, 2-23, 2-25, 2-26, 2-27, 2-28, 2-32, 3-34, 2-35, 2-36, 2-38, 2-52, 2-53, 2-54, 2-55, 2-61, 2-64, 2-65, 2-66, 2-74, 2-82, 2-85, 2-86, 2-87, 2-88, 2-89, 2-92, 2-93, 2-94, 2-95, 2-96, 2-97, 2-98, 2-99, 2-100, 2-101, 2-105, 2-106, 2-107, 2-108, 2-109, 2-112, 2-113, 2-114, 2-115, 2-116, 2-131, 2-154, 2-155, 2-158, 2-159, 2-160, 2-161, 2-163, 2-165, 2-169, 2-170, 2-175, 2-176, 2-177, 2-178, 2-179, 2-182, 2-183, 2-186, 2-188, 2-189, 2-196, 2-197, 2-199, 2-200, 2-201, 2-202, 2-208, 2-210, 2-211, 2-215, 2-218, 2-219, 2-233, 2-234, 2-236, 2-251, 2-256, 2-258, 2-261, 2-266, 2-267, 2-268, 2-275, 2-280, 2-287, 2-290, 2-291, 2-292, 2-293, 2-294, 2-295, 2-298, 2-302, 2-315, 2-318, 2-319, 2-320, 2-325, 2-338, 2-341, 2-348, 2-349, 2-353, 2-354, 2-360, 2-379, 2-382, 2-396, 2-398, 2-399, 2-400, 2-412, 2-416, 2-418, 2-421, 2-422, 2-423, 2-428, 2-432, 2-434, 2-439, 2-440, 2-451, 2-452, 2-464, 2-465, 2-471, 2-472, 2-476, 2-477, 2-478, 2-480, 2-481, 2-482, 2-486, 2-488, 2-489, 2-491, 2-493, 2-495, 2-496, 2-497, 2-501, 2-503, 2-504, 2-506, 2-512, 2-513, 2-516, 2-523, 2-524, 2-525, 2-562, 2-573, 2-574, 2-577, 2-578, 2-585, 2-590, 2-591, 2-593, 2-595
04.02	3-7	2-126, 2-405, 2-483, 2-509, 2-546, 2-567
04.03	3-8	2-51, 2-121
<b>No Action Alternative</b>		
05.01	3-8	2-30, 2-31, 2-130, 2-192, 2-279, 2-280
<b>Reduced Operation Alternative</b>		
06.01	3-9	2-29, 2-32, 2-39, 2-51, 2-86, 2-95, 2-96, 2-177, 2-330, 2-385, 2-397, 2-399, 2-486, 2-546
<b>Alternatives Considered But Eliminated</b>		
07.01	3-9	2-15, 2-26, 2-27, 2-33, 2-33, 2-36, 2-38, 2-52, 2-53, 2-54, 2-55, 2-61, 2-63, 2-64, 2-65, 2-69, 2-76, 2-77, 2-80, 2-82, 2-84, 2-86, 2-94, 2-96, 2-100, 2-106, 2-111, 2-117, 2-152, 2-154, 2-158, 2-160, 2-161, 2-163, 2-166, 2-168, 2-168, 2-169, 2-174, 2-177, 2-178, 2-179, 2-183, 2-186, 2-191, 2-194, 2-196, 2-197, 2-199, 2-200, 2-201, 2-209, 2-212, 2-217, 2-219, 2-220, 2-234, 2-236, 2-238, 2-246, 2-252, 2-253, 2-254, 2-256, 2-258, 2-260, 2-263, 2-266, 2-268, 2-285, 2-294, 2-297, 2-302, 2-316, 2-318, 2-333, 2-344, 2-361, 2-382, 2-397, 2-398, 2-401, 2-410, 2-411, 2-414, 2-418, 2-419, 2-420, 2-423, 2-424, 2-429, 2-434, 2-437, 2-441, 2-472, 2-476, 2-478, 2-479, 2-481, 2-489, 2-491, 2-493, 2-497, 2-500, 2-501, 2-503, 2-504, 2-506, 2-512, 2-524, 2-533, 2-537, 2-562, 2-573, 2-576, 2-577, 2-578, 2-579, 2-591, 2-593, 2-595
07.02	3-10	2-39, 2-119, 2-233, , 2-295, 2-384, 2-385, 2-420
07.03	3-10	2-160, 2-386, 2-387, 2-411, 2-582

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>Other Alternatives</b>		
08.01	3-10	2-37, 2-39, 2-152, 2-199, 2-217, 2-221, 2-222, 2-225, 2-226, 2-227, 2-228, 2-247, 2-248, 2-281, 2-314, 2-315, 2-342, 2-408, 2-409, 2-443, 2-465, 2-466, 2-467, 2-483, 2-534, 2-536, 2-537, 2-581, 2-582, 2-583
08.02	3-12	2-14, 2-16, 2-37, 2-60, 2-62, 2-67, 2-68, 2-74, 2-75, 2-76, 2-77, 2-80, 2-81, 2-105, 2-109, 2-153, 2-174, 2-182, 2-184, 2-194, 2-195, 2-217, 2-219, 2-232, 2-233, 2-235, 2-237, 2-244, 2-248, 2-253, 2-255, 2-259, 2-261, 2-262, 2-264, 2-269, 2-286, 2-295, 2-342, 2-373, 2-401, 2-402, 2-403, 2-405, 2-406, 2-470, 2-471, 2-475, 2-491, 2-492, 2-495, 2-498, 2-499, 2-502, 2-511, 2-513, 2-533, 2-536, 2-542, 2-543, 2-573, 2-575, 2-578, 2-585, 2-586, 2-587, 2-592, 2-595
08.03	3-12	2-70
<b>Land Use</b>		
09.01	3-12	2-70
09.02	3-13	2-70, 2-71
09.03	3-13	2-71, 2-509, 2-526, 2-537, 2-538
<b>Community Services</b>		
10.01	3-14	2-584
<b>Prehistoric and Historic Cultural Resources</b>		
11.01	3-14	2-127, 2-486
11.02	3-15	2-123, 2-124
11.03	3-15	2-124
<b>Aesthetics and Scenic Resources</b>		
12.01	3-15	2-71
<b>Meteorology</b>		
No comments were received related to meteorology.		
<b>Geology</b>		
14.01	3-16	2-17, 2-63, 2-69, 2-76, 2-77, 2-84, 2-87, 2-110, 2-115, 2-125, 2-172, 2-173, 2-176, 2-185, 2-200, 2-234, 2-238, 2-246, 2-260, 2-263, 2-265, 2-273, 2-286, 2-319, 2-332, 2-351, 2-361, 2-397, 2-406, 2-461, 2-472, 2-485, 2-493, 2-494, 2-500, 2-537, 2-548, 2-576, 2-588
14.02	3-18	2-121
14.03	3-19	2-115, 2-125, 2-126, 2-280, 2-548
<b>Socioeconomics/Environmental Justice</b>		
15.01	3-20	2-26, 2-98, 2-115, 2-186, 2-292, 2-293, 2-381, 2-399, 2-400
15.02	3-20	2-130, 2-401, 2-439, 2-548, 2-549, 2-581
<b>Biological Resources</b>		
16.01	3-21	2-178, 2-212, 2-269, 2-342, 2-424, 2-433, 2-495, 2-544
16.02	3-22	2-59, 2-127, 2-378, 2-407, 2-483, 2-485, 2-509, 2-537, 2-554, 2-555, 2-556, 2-557, 2-558
16.03	3-25	2-126, 2-127, 2-130, 2-407, 2-408, 2-472, 2-483, 2-485, 2-509, 2-523, 2-537, 2-554, 2-555, 2-556, 2-557, 2-558
16.04	3-26	2-407, 2-483, 2-485, 2-557
16.05	3-26	2-407, 2-483, 2-485

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>Air Quality</b>		
17.01	3-26	2-2, 2-58, 2-115, 2-121, 2-178, 2-401, 2-439, 2-484, 2-509, 2-558, 2-567
17.02	3-28	2-58, 2-72, 2-272, 2-273, 2-544
17.03	3-30	2-72, 2-124, 2-486, 2-559, 2-566, 2-567
17.04	3-32	2-28, 2-188, 2-190, 2-218, 2-266, 2-267, 2-268, 2-405, 2-439, 2-495, 2-537, 2-566
17.05	3-33	2-560
17.06	3-34	2-59, 2-483, 2-567
17.07	3-34	2-2, 2-414, 2-509, 2-551
<b>Water</b>		
18.01	3-35	2-28, 2-115, 2-178, 2-281, 2-341, 2-342, 2-509, 2-544, 2-567
18.02	3-36	2-28, 2-59, 2-60, 2-495
18.03	3-36	2-548
18.04	3-36	2-11
<b>Noise</b>		
No comments were received related to noise.		
<b>Traffic and Transportation</b>		
20.01	3-37	2-56, 2-57, 2-90, 2-119, 2-123, 2-193, 2-277, 2-438, 2-439, 2-439, 2-478, 2-552, 2-553
20.02	3-39	2-123, 2-559
20.03	3-39	2-71, 2-72
20.04	3-40	2-526
20.05	3-41	2-17, 2-31, 2-58, 2-63, 2-69, 2-76, 2-77, 2-84, 2-110, 2-123, 2-186, 2-234, 2-238, 2-246, 2-249, 2-260, 2-263, 2-265, 2-266, 2-370, 2-371, 2-377, 2-500, 2-514, 2-552, 2-553, 2-559, 2-576, 2-589
<b>Utilities and Energy</b>		
21.01	3-41	2-194, 2-548
<b>Materials and Waste Management</b>		
22.01	3-42	2-17, 2-57, 2-58, 2-63, 2-69, 2-76, 2-77, 2-84, 2-110, 2-185, 2-186, 2-193, 2-234, 2-238, 2-246, 2-249, 2-260, 2-263, 2-265, 2-331, 2-370, 2-500, 2-514, 2-549, 2-559, 2-559, 2-576, 2-589
22.02	3-43	2-90, 2-118, 2-119, 2-122, 2-168, 2-168, 2-176, 2-276, 2-280, 2-338, 2-367, 2-368, 2-420, 2-485, 2-486, 2-509
22.03	3-43	2-58, 2-91, 2-122, 2-277, 2-559
22.04	3-44	2-99, 2-472
22.05	3-44	2-559
22.06	3-44	2-58, 2-119
22.07	3-45	2-91, 2-123, 2-125
<b>Human Health and Safety</b>		
23.01	3-45	2-27, 2-28, 2-29, 2-30, 2-85, 2-92, 2-99, 2-101, 2-102, 2-115, 2-116, 2-153, 2-167, 2-175, 2-177, 2-179, 2-212, 2-233, 2-252, 2-273, 2-302, 2-335, 2-339, 2-378, 2-379, 2-390, 2-417, 2-422, 2-433, 2-469, 2-479, 2-484, 2-505, 2-513, 2-523, 2-525, 2-537, 2-543, 2-554, 2-563, 2-581

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>Human Health and Safety (continued)</b>		
23.02	3-46	2-30, 2-87, 2-100, 2-107, 2-114, 2-120, 2-151, 2-152, 2-211, 2-212, 289, 2-322, 2-323, 2-324, 2-350, 2-351, 2-352, 2-353, 2-378, 2-432, 2-433, 2-434, 2-438, 2-440, 2-447, 2-478, 2-479, 2-537, 2-543, 2-545, 2-553, 2-589
23.03	3-48	2-100, 2-153, 2-194, 2-280, 2-288, 2-434
23.04	3-49	2-160, 2-404, 2-433
23.05	3-49	2-30, 2-581, 2-582
<b>Site Contamination and Remediation</b>		
24.01	3-49	2-105, 2-353, 2-366, 2-367, 2-368, 2-397, 2-398, 2-425, 2-478, 2-495, 2-523
24.02	3-50	2-26, 2-86, 2-107, 2-401, 2-405, 2-422, 2-483, 2-485
24.03	3-50	2-86, 2-342, 2-413, 2-558
24.04	3-51	2-188, 2-529, 2-554
24.05	3-51	2-122, 2-124
<b>Accidents</b>		
25.01	3-52	2-16, 2-62, 2-68, 2-75, 2-77, 2-83, 2-102, 2-110, 2-120, 2-173, 2-175, 2-184, 2-193, 2-213, 2-215, 2-233, 2-237, 2-244, 2-259, 2-262, 2-265, 2-268, 2-273, 2-319, 2-388, 2-499, 2-508, 2-509, 2-537, 2-551, 2-575, 2-587
25.02	3-55	2-91, 2-509
25.03	3-56	2-153, 2-485
25.04	3-56	2-194, 2-374, 2-381, 2-408, 2-509, 2-542
25.05	3-57	2-108, 2-192, 2-211, 2-231, 2-232, 2-342, 2-343, 2-381, 2-452, 2-495, 2-496, 2-508, 2-509, 2-550, 2-551, 2-553, 2-581
25.06	3-59	2-56, 2-100, 2-115, 2-151, 2-152, 2-153, 2-168, 2-176, 2-181, 2-192, 2-193, 2-339, 2-413, 2-414, 2-446, 2-447, 2-459, 2-460, 2-508, 2-509, 2-530, 2-550, 2-551, 2-554, 2-559, 2-560, 2-567, 2-584
25.07	3-62	2-288, 2-375, 2-376, 2-413, 2-434, 2-435, 2-462, 2-508, 2-543, 2-544, 2-550, 2-551, 2-553, 2-554, 5-567
25.08	3-63	2-89, 2-127, 2-153, 2-175, 2-193, 2-278, 2-279, 2-330, 2-368, 2-369, 2-413, 2-414, 2-416, 2-417, 2-508, 2-550
25.09	3-64	2-124, 2-125
25.10	3-64	2-115, 2-337, 2-351, 2-493
<b>National Ignition Facility</b>		
26.01	3-65	2-16, 2-33, 2-37, 2-61, 2-62, 2-63, 2-68, 2-75, 2-77, 2-82, 2-84, 2-105, 2-110, 2-116, 2-117, 2-120, 2-153, 2-154, 2-159, 2-167, 2-217, 2-219, 2-222, 2-234, 2-236, 2-238, 2-245, 2-249, 2-253, 2-254, 2-255, 2-256, 2-258, 2-259, 2-260, 2-170, 2-262, 2-265, 2-283, 2-301, 2-331, 2-363, 2-373, 2-374, 2-402, 2-437, 2-468, 2-475, 2-477, 2-478, 2-491, 2-492, 2-499, 2-502, 2-511, 2-512, 2-513, 2-514, 2-538, 2-539, 2-539, 2-540, 2-573, 2-576, 2-578, 2-588, 2-592, 2-595
26.02	3-67	2-31, 2-228, 2-229, 2-539, 2-564

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>National Ignition Facility (continued)</b>		
26.03	3-67	2-16, 2-19, 2-40, 2-42, 2-44, 2-46, 2-47, 2-48, 2-49, 2-50, 2-51, 2-62, 2-63, 2-68, 2-73, 2-75, 2-77, 2-110, 2-153, 2-159, 2-161, 2-170, 2-182, 2-185, 2-192, 2-196, 2-219, 2-234, 2-236, 2-238, 2-245, 2-249, 2-253, 2-255, 2-258, 2-259, 2-260, 2-262, 2-265, 2-283, 2-364, 2-475, 2-491, 2-492, 2-499, 2-501, 2-539, 2-539, 2-576, 2-578, 2-588, 2-592, 2-595
26.04	3-72	2-16, 2-45, 2-50, 2-63, 2-68, 2-75, 2-77, 2-110, 2-117, 2-119, 2-159, 2-167, 2-185, 2-191, 2-194, 2-234, 2-238, 2-245, 2-260, 2-262, 2-265, 2-284, 2-318, 2-403, 2-499, 2-534, 2-545, 2-576, 2-577, 2-588
26.05	3-74	2-39, 2-40, 2-41, 2-43, 2-44, 2-45, 2-46, 2-47, 2-50, 2-334, 2-385
26.06	3-76	2-42, 2-43, 2-46, 2-47, 2-48, 2-49, 2-526, 2-540
26.07	3-76	2-42, 2-539
<b>Integrated Technology Project</b>		
27.01	3-77	2-16, 2-18, 2-19, 2-26, 2-31, 2-33, 2-37, 2-51, 2-60, 2-62, 2-68, 2-75, 2-77, 2-81, 2-82, 2-83, 2-105, 2-107, 2-110, 2-116, 2-117, 2-120, 2-153, 2-161, 2-170, 2-174, 2-182, 2-184, 2-192, 2-195, 2-196, 2-217, 2-219, 2-220, 2-223, 2-224, 2-225, 2-229, 2-230, 2-234, 2-235, 2-237, 2-239, 2-240, 2-241, 2-245, 2-249, 2-253, 2-255, 2-256, 2-259, 2-262, 2-265, 2-266, 2-283, 2-286, 2-287, 2-311, 2-373, 2-376, 2-377, 2-380, 2-402, 2-410, 2-432, 2-436, 2-452, 2-444, 2-454, 2-455, 2-456, 2-459, 2-464, 2-471, 2-475, 2-477, 2-478, 2-491, 2-492, 2-499, 2-501, 2-502, 2-511, 2-535, 2-546, 2-547, 2-573, 2-575, 2-577, 2-578, 2-587, 2-592, 2-595
27.02	3-78	2-101, 2-120, 2-191, 2-223, 2-224, 2-225, 2-229, 2-523, 2-547
27.03	3-78	2-121, 2-223, 2-224, 2-225, 2-229, 2-460, 2-461
<b>Pollution Prevention</b>		
28.01	3-79	2-12, 2-59
<b>Emergency Response</b>		
29.01	3-79	2-57, 2-58, 2-127, 2-175, 2-374, 2-484, 2-485, 2-552
<b>Security</b>		
30.01	3-80	2-2, 2-14, 2-28, 2-31, 2-57, 2-58, 2-87, 2-88, 2-89, 2-127, 2-168, 2-170, 2-193, 2-230, 2-231, 2-232, 2-268, 2-269, 2-286, 2-332, 2-337, 2-439, 2-440, 2-451, 2-469, 2-525, 2-543, 2-551, 2-552
30.02	3-81	2-2, 2-31, 2-83, 2-107, 2-127, 2-217, 2-221, 2-248, 2-279, 2-286, 2-338, 2-342, 2-346, 2-421, 2-427, 2-494, 2-495, 2-508, 2-543, 2-551
<b>Regulatory Compliance (NEPA Process/Public Involvement/Community Relations)</b>		
31.01	3-82	2-120, 2-130, 2-194, 2-151, 2-152, 2-169, 2-177, 2-222, 2-225, 2-226, 2-227, 2-228, 2-229, 2-248, 2-279, 2-369, 2-467, 2-468, 2-536, 2-583

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>Regulatory Compliance (NEPA Process/Public Involvement/Community Relations) (continued)</b>		
31.02	3-84	2-39, 2-67, 2-74, 2-86, 2-118, 2-151, 2-214, 2-269, 2-277, 2-321, 2-322, 2-383, 2-384, 2-387, 2-401, 2-405, 2-416, 2-428, 2-484, 2-507, 2-526, 2-526, 2-527, 2-528, 2-532, 2-562, 2-572, 2-580, 2-581, 2-282, 2-583, 2-584
31.03	3-85	2-299, 2-300, 2-523, 2-564, 2-580, 2-582
31.04	3-86	2-15, 2-62, 2-67, 2-74, 2-76, 2-83, 2-86, 2-96, 2-109, 2-118, 2-131, 2-176, 2-180, 2-183, 2-192, 2-223, 2-230, 2-232, 2-233, 2-237, 2-244, 2-248, 2-259, 2-261, 2-264, 2-279, 2-283, 2-288, 2-365, 2-366, 2-368, 2-397, 2-403, 2-418, 2-420, 2-437, 2-498, 2-513, 2-516, 2-518, 2-532, 2-547, 2-561, 2-575, 2-586
31.05	3-86	2-120, 2-126, 2-223, 2-224, 2-225, 2-229, 2-280, 2-582
31.06	3-86	2-40, 2-88, 2-118, 2-119, 2-123, 2-130, 2-130, 2-214, 2-526, 2-527, 2-528, 2-530, 2-532, 2-547, 2-560, 2-561
31.07	3-88	2-288, 2-565, 2-566
31.08	3-88	2-404
31.09	3-88	2-31, 2-128, 2-549, 2-550
31.10	3-89	2-288, 2-419, 2-532, 2-536
<b>Outside the Scope of the LLNL SW/SPEIS</b>		
32.01	3-89	2-56, 2-405, 2-560
32.02	3-89	2-11, 2-22, 2-24, 2-55, 2-108, 2-117, 2-203, 2-233, 2-250, 2-410, 2-412, 2-430, 2-441, 2-443
32.03	3-90	2-20, 2-80, 2-302, 2-404, 2-405, 2-563
32.04	3-90	2-3, 2-24, 2-35, 2-105, 2-113, 2-217, 2-251, 2-359, 2-371
32.05	3-90	2-20, 2-445
<b>Plutonium Limits</b>		
33.01	3-90	2-14, 2-16, 2-26, 2-28, 2-31, 2-33, 2-37, 2-56, 2-57, 2-60, 2-62, 2-64, 2-66, 2-68, 2-73, 2-75, 2-77, 2-81, 2-83, 2-94, 2-101, 2-105, 2-107, 2-108, 2-110, 2-115, 2-116, 2-117, 2-120, 2-121, 2-122, 2-153, 2-155, 2-161, 2-167, 2-167, 2-173, 2-179, 2-182, 2-184, 2-188, 2-190, 2-191, 2-192, 2-193, 2-195, 2-197, 2-199, 2-218, 2-219, 2-231, 2-233, 2-234, 2-235, 2-237, 2-244, 2-245, 2-248, 2-253, 2-255, 2-256, 2-257, 2-259, 2-262, 2-265, 2-266, 2-268, 2-269, 2-280, 2-283, 2-285, 2-289, 2-331, 2-336, 2-379, 2-402, 2-429, 2-430, 2-432, 2-435, 2-436, 2-437, 2-440, 2-461, 2-463, 2-469, 2-475, 2-491, 2-492, 2-499, 2-502, 2-505, 2-507, 2-511, 2-513, 2-523, 2-542, 2-543, 2-544, 2-546, 2-547, 2-573, 2-575, 2-587, 2-590
<b>Tritium Limits</b>		
34.01	3-92	2-16, 2-26, 2-33, 2-62, 2-64, 2-68, 2-75, 2-77, 2-83, 2-84, 2-110, 2-115, 2-116, 2-117, 2-184, 2-209, 2-233, 2-234, 2-237, 2-244, 2-245, 2-256, 2-257, 2-259, 2-262, 2-265, 2-268, 2-269, 2-283, 2-374, 2-403, 2-424, 2-430, 2-432, 2-499, 2-513, 2-514, 2-534, 2-535, 2-544, 2-545, 2-575, 2-587

**TABLE 1.3–11.—Comments Sorted by Summary Code (continued)**

Summary Code	Summary Page No.	Document Page No.
<b>BioSafety Level-3 Facility</b>		
35.01	3-93	2-2, 2-11, 2-17, 2-18, 2-28, 2-38, 2-61, 2-63, 2-64, 2-68, 2-69, 2-75, 2-76, 2-77, 2-82, 2-84, 2-88, 2-102, 2-106, 2-110, 2-117, 2-127, 2-128, 2-154, 2-159, 2-162, 2-170, 2-173, 2-174, 2-176, 2-177, 2-178, 2-182, 2-185, 2-188, 2-190, 2-191, 2-193, 2-194, 2-196, 2-201, 2-217, 2-219, 2-234, 2-236, 2-238, 2-246, 2-249, 2-254, 2-256, 2-260, 2-262, 2-265, 2-310, 2-331, 2-354, 2-355, 2-374, 2-380, 2-406, 2-408, 2-410, 2-444, 2-476, 2-477, 2-478, 2-490, 2-491, 2-492, 2-493, 2-500, 2-501, 2-502, 2-512, 2-573, 2-576, 2-577, 2-578, 2-581, 2-588, 2-592, 2-593, 2-595
<b>Lawrence Berkeley National Laboratory Waste Drums</b>		
36.01	3-95	2-81, 2-194, 2-276, 2-367, 2-552
<b>Developing New Technologies for Plutonium Pit Manufacturing</b>		
37.01	3-96	2-2, 2-14, 2-16, 2-38, 2-61, 2-62, 2-64, 2-66, 2-68, 2-75, 2-77, 2-82, 2-83, 2-84, 2-94, 2-102, 2-106, 2-110, 2-116, 2-117, 2-159, 2-170, 2-179, 2-182, 2-184, 2-185, 2-191, 2-196, 2-197, 2-198, 2-202, 2-217, 2-218, 2-219, 2-234, 2-236, 2-237, 2-245, 2-249, 2-254, 2-255, 2-256, 2-259, 2-262, 2-265, 2-266, 2-284, 2-299, 2-348, 2-374, 2-380, 2-425, 2-429, 2-436, 2-469, 2-470, 2-475, 2-491, 2-492, 2-499, 2-501, 2-502, 2-512, 2-513, 2-515, 2-535, 2-543, 2-546, 2-573, 2-575, 2-578, 2-587, 2-588, 2-592, 2-595
<b>Container Security Testing Facility</b>		
38.01	3-97	2-31, 2-128, 2-193, 2-549
<b>Preparation for Test Readiness</b>		
39.01	3-97	2-17, 2-28, 2-33, 2-38, 2-61, 2-63, 2-64, 2-66, 2-68, 2-75, 2-77, 2-82, 2-84, 2-94, 2-95, 2-159, 2-170, 2-185, 2-191, 2-196, 2-198, 2-202, 2-209, 2-219, 2-233, 2-234, 2-236, 2-238, 2-245, 2-246, 2-249, 2-254, 2-255, 2-257, 2-258, 2-262, 2-265, 2-284, 2-285, 2-348, 2-374, 2-403, 2-458, 2-459, 2-475, 2-476, 2-491, 2-492, 2-499, 2-501, 2-502, 2-512, 2-514, 2-535, 2-545, 2-573, 2-576, 2-578, 2-588, 2-592, 2-595



## CHAPTER 2: COMMENT DOCUMENTS

This chapter is a compilation of all the documents that the Department of Energy (DOE) received during the public comment period on the *Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement*. The documents are presented alphabetically. On each document the first number represents the comment number within that document and the second number represents the issue summary code assigned to this comment. This number can be used to locate the summary and response relating to this comment. Section 1.3 describes the organization of this Comment Response Document and discusses the tables provided in Chapter 1 to assist readers in tracking their comments to the respective comment summary and responses. Chapter 3 provides comment summaries and DOE responses by category.

**A High School Student**  
Page 1 of 1

**A Livermore Employee Who Lives in Tracy, California**  
Page 1 of 1

Dear Mr Tom Grim

I would like to voice my opinion  
of opposition on the Environmental Impact  
Statement please don't make bombs and  
anthrax near my home.

-A high school  
student

Mr. Tom Grim

Comment on the Site Wide Environmental Impact Statement

1/17.07 The controlled burns at Site 300 are not discussed in any detail in the draft EIS, but now that the EPA has designated the region as one out of compliance with their guidelines on air quality, a more thorough discussion is needed. For example, what does the controlled burning of brush add to the amount of pollutants in the atmosphere? Also since there are alternatives to burning such as mowing or in steep areas like Site 300 goats have been used to keep the vegetation down. Also Site 300 soil and water is contaminated with uranium and tritium, but no discussion is given on the amounts of these radioactive elements spread by the fires. For example, tritium monitors that give a constant read out of tritium release ring the Livermore site. There is no such set of monitors around Site 300. There is no explanation for this discrepancy. There is a proposal to release 200 curies of tritium a year from Site 300, which is similar to the amount of tritium, released from the Livermore site.

2/17.01 My other comment is terrorist attack. At the Livermore City Council meeting, you said all of the evaluations are classified. That is not factual. The GAO report and the POGO report that were provided to Congress are both unclassified and fairly detailed. Why are the findings from these reports not discussed in the draft EIS and why are they not references since they are pertinent to a possible terrorist attack. Is Site 300 a possible target for attack with the radioactive materials used in testing?

3/30.01, 30.02

From,  
A Livermore employee who lives in Tracy California

Aaland, Hans  
Page 1 of 4

Aaland, Hans  
Page 2 of 4

Comment in regards to Nuclear Weapons plan  
FAX 422-1776  
To Tom Grim.

We are dead men walking,  
if we go against the clarity  
our utopia society gives  
birth to. We must advance  
in moral progress to achieve  
a good relationship with the  
creator, with whom we can  
interact to. I've presented  
myself, interacting with God,  
for many years, as fore, I've  
quoted the Bible (mostly old test-  
ament prophet books).

Since before 2001, I've  
been faxing 107.7 The Bone,  
and more recently faxing  
(both with toll free numbers)  
Jim Teel, CHP, inspector in  
Sacramento. To both Jim

5-27-04  
From  
Hans Aaland  
to  
Tom Grim  
Call 422-1776  
Fax 422-1776  
107.7 The Bone  
107.7 The Bone

1/32.04

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and the radio station, I've  
claimed to be the guy on  
the Great Seal of California,  
I say I found it, you say  
Eureka, you'll know who I  
am by the response I get  
from all at the same time!  
Expect one to come who'll have  
barely hung till he's figured  
out how we all can connect  
inbetween, then shall God  
burst Jacobs bonds (see Jer-  
emiah 30:8) so that none  
shall make him afraid (verse 10).

I Fear now, as I know  
even the President by now  
must believe I am who I  
say I am, if we don't see  
the wire between it all

1/32.04  
cont.

Aaland, Hans  
Page 3 of 4

Aaland, Hans  
Page 4 of 4

1/32.04  
cont.

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We'll not be able to cross to a better place when its revealed by Gods plan were going the wrong direction. I warned the President before he invaded Iraq, with Isaiah 22. If I had been Governor, like my cause deserves, we'd have been closer to verse 18/ the chariots of thy glory shall be the shame of thy lords house. I'm against nuclear weapons!

I've defined what the President claims to protect by focusing (at least initially) on the axis of evil! With four letters I'm able to consistently climb on top of my Giraffe (elongated) Unicycle, and with four letters I've found the axis, I

1/32.04  
cont.

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Note: There's a scheme to spirit, as even readers can be readability with the emblem's good eye found by the loop of the R while looking out.

can apply to every situation, and balance what is best. I.I.Y.R. - Independent Interactive - Yea Right. It gives us a rub between the letter and the immediate surroundings. Make the letter Y with your arms lifted up, then make an R, by the loop being formed by cupping your right hand towards the left, and connecting to your left hand and arm. Y.R. for Yea Right, and I.I., even if its just saying to yourself, yea right, as I pass along. Its when people put us in battles are we now as we cant go through the wilderness (see Jeremiah 9, 12)!

No Nukes or weapons to put us in danger. Y.R. it books take much to see!  
From: Hans Aaland  
Let us lift up, and not just blunder.

Aaland, Hans  
Page 1 of 1

Aaland, Hans  
Page 1 of 6

Concerning Nuclear Plans  
written comment (2nd today) 5-27-04  
From, Hans (Aaland)

Fax: 422-1776  
To Tom Grim,

This is a special valley in that you can see the face of Jesus on Mount Diablo from Pleasanton area. It was in an article many years ago. In the Valley Times. I've even seen John F. Kennedy while driving towards Pleasanton, on the hills behind. He's up to the right of the road. On a clear day, see for yourself sometime.

This is a spiritual valley while on Aerial maps. Diablo is ground zero, let us not fail to look through to loop. Y.R. dont believe, but lifting hands and looking through it together see Robtans 11/22/11 All Unit behaves 4/6/04

Notes I of II: Isaiah 22:16 what hast thou here, and whom hast thou here, that thou hast hewed thee out a sepulchre here, as he that heweth him out a sepulchre on high, and that graveth an habitation for himself in a rock? Unimpaired

Notes II of II: Isaiah 22:7 And it shall come to pass, that thy choicest valleys shall be full of thy horsemen shall set themselves in array at the gate.

Notes: Lets not subject this valley to unnecessary risk as nuclear glory is meant for stupid fools

From, Hans

1/32.04  
cont.

Concerning Nuclear Weapons  
Fax 422-1776  
To Tom Grim

5-28-04  
before Hans Aaland

I saw somebody walking today, like I do most mornings on my paper route in town. I found out he works at the lab (like I thought) though not affiliated with work on nuclear aspect. I mentioned I wrote, and asked him if he thought they'd listen if I fax something more today and he said he thought they would (purpose before plan).

When I'd said that to him (and shortly after) I noticed a reaction from somebody who could hear me as looking in from the sky. I think with technology

(7) 1 1

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

Aaland, Hans  
Page 2 of 6

#3 of 6

today, that's very possible,  
someone whose attention  
I've stirred could be watch-  
ing me closely. I'm glad,  
like I've invited a pop-  
ular radio station and  
the California Highway  
Patrols top inspector to  
respect me as they do,  
and give me my voice too.  
Preferably my voice  
first, asore there was  
a C.H.P. once, who pre-  
judged me, and came  
running after me while  
I was on my Giraffe

Aaland, Hans  
Page 3 of 6

#3 of 6

Unicycle! I was weaving  
in the wind with a big  
cardboard sign (I often  
carry, with something  
written on it) I'd al-  
ready checked out and  
around<sup>at</sup> the turnaround,  
parking spot before the  
Golden Gate bridge<sup>where I was.</sup> Every-  
thing seemed clear! Why  
all of a sudden was there  
a C.H.P. Officer yelling at  
me, and suddenly running  
after me?! I knew I best  
level with him quick, so I  
dropped down off my unicycle

Aaland, Hans  
Page 4 of 6

# ④ of 6

and innocently showed  
my concern about him.  
I didn't manage  
to stop him before he  
began so determinly,  
and popping up from the  
shaded walkway, over a-  
long the building. Before  
I knew it, I was being  
tackled by a bunch of  
officers. Now we're in a  
wisp, a cat with a wisk-  
er hasn't a fleeting  
chance! I heard later,  
there was even an art-  
icle in the paper, while  
the seldom beer I'd had  
earlier in the <sup>day</sup> still smell-  
ed from my breath. I've

Aaland, Hans  
Page 5 of 6

# ⑤ of 6

even heard I was written  
against in the SF Chronicle.  
A night in prison at  
San Francisco, and though  
they made the hospital take  
my blood, their report (Police)  
showed I refused the  
blood test. Peoples  
using words like they  
don't have anything to  
do with the truth, I'll  
say! Far cry from I.I.,  
Y.R.! Just a plan engaged  
with no means of chang-  
ing them, once it's de-  
cided.

Y.R.! The difference  
between me and you is



Aaland, Hans  
Page 1 of 2

Aaland, Hans  
Page 2 of 2

Concern: Future vision / Please tell us any holes I've left out. Concern across is we miss the point or don't get us in direction we must go. *Hans Aaland*

Fax: 422-1776  
To Tom Grim.

You talk of defence 10 years off, yet I talk of, and direct to the scripture Hagga. 3:9, to combat terrorism threat today! It is written; For thou wilt I turn to the people a pure language, that they may call upon the name of the LORD, to serve him with our consent.

vs. 8 Therefore wait ye upon me, saith the LORD, until the day that I rise up to prey; for my determination is to gather the nations, that I may assemble the Kingdoms, to pour upon them my indignation, even all my fierce anger; for all the earth

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

pg. 2 of 2

shall be devoured with the fire of my jealousy.  
I said, Surely thou wilt fear me, thou wilt receive instructions, so their dwelling should not be cut off, howsoever I punished them; but they rose early, and corrupted all their doings.

to I in that day it shall be said to Jerusalem, Fear thou not; and to Zion, Let not thine hands be slack.  
The LORD thy God is in the midst of thee, is mighty; he will save, he will rest in his love, he will joy over thee with singing.

Allow me to introduce myself, for in God do I delight. *Hans Aaland*

Aaland, Hans  
Page 1 of 2

Aaland, Hans  
Page 2 of 2

Concerning - future vision for all  
 Fay 1572-1776  
 To Tom Grim

What a wonderful country we live in that I see all things I do and talk about them too, is collective efforts from the many, for a long time which made it possible! We are the sum of the energy which has been collected to now. I feel as though if I've been supported, as Governments been guided by the Bible, so can I interject where the Bible makes its point at the head.

We are all unbelievers, as any can point to Romans 11:32. God concludes all in unbelief that he may have mercy

6-1-02  
 rom, Hans, Aaland  
 pg. 2 of 2  
 call 950-6050

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

pg. 2 of 2

on all. Yea right, you say, Y.R., I too, let us breathe in between, and see what God can do. One is missing between 11:32! 1 + 1 = 153, and 1 after 2 is 321. Walk this way, come together over me! Spiritual connection and Gods jealousy will be stirred. Even all the isles of the heathen will worship God, everyone from his place. - Zephaniah 2:11.

When we can define the line between all, all can be directed, as for it has a nucleus by which if any is out, it need not Y.R. themselves to express their no! Better Y.R. ahead!

\* See Zephaniah 2:11  
 \* Y.R. Yea Right, express with your arms and sign of right hand.  
 rom, Hans

Abrahamson, Carl C.  
Page 1 of 1

Alameda County Flood Control and Water Conservation District,  
Jim Horen, Principal Engineer, Advance Planning Section  
Page 1 of 4

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

**From:** Mary Abrahamson [mailto:mabrason@hickorytech.net]  
**Sent:** Wednesday, May 12, 2004 7:06 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:** nuclear weapons

1/01.01.1  
01.03  
2/32.02

Now is the time to end the nuclear threat. The only way to do that is for the two most threatening nations to disarm. Yes, I am talking about Russia and the US. According to statistics, both nations have over 8,000 warheads still in their stockpile. More than 2,000 of our nations missiles are on hair trigger. This means that a president with a hair trigger temper (like Bush) could end the lives of 10's of millions of innocent people with a quick button push. This will truly be the end of the world as we know it. Sincerely, Carl C. Abrahamson, concerned citizen.



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

SAN PABLO DRIVE PLEASANTON CALIFORNIA 94566-1101 TEL: (925) 434-7000 FAX: (925) 963-0774

May 27, 2004

Mr. Thomas Grim, Document Manager  
National Nuclear Security Administration  
United States Department of Energy  
Livermore Site Office, L-293  
7000 East Avenue,  
Livermore, CA 94550-9234

Re: Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (Draft LLNL SW/SPEIS)

Dear Mr. Grim:

Zone 7 has reviewed the referenced NEPA document in the context of our mission to provide drinking water, non-potable water for agriculture and irrigated turf, flood protection, and groundwater and stream management in the Livermore-Amador Valley. Our understanding is that the proposed project consists of the continued operation of the LLNL, including foreseeable future operations, facilities, and activities, which include proposed modifications to existing projects and new programs. Our comments on the Environmental Impact Statement are as follows:

1. Page S-10 to S-12, Paragraphs S.5.1.1 to S.5.1.10, National Ignition Facility, BioSafety Level 3 Facility, Terascale Simulation Facility, Container Security Testing Facility, International Security Research Facility, etc.  
  
These paragraphs state that certain new facilities are currently under construction or will be in the future. The total impervious area will likely increase due to the planned construction of over 450,000 square feet of new facilities that could lead to additional runoff. The changes in pervious area and impervious area should be clarified. If there will be an increase in impervious area over the existing improvements then Zone 7's standard practice is to assess new development with Special Drainage Area 7-1 (SDA 7-1) drainage fees. Fees are collected for any development creating new impervious areas that would contribute runoff to Zone 7's flood control facilities.  
  
Zone 7 has flood control facilities, Line P (Arroyo Seco) and Line P-1 (Re-located Arroyo Las Positas), adjacent to the LLNL site, i.e., southwest and northwest, respectively. The increased impervious areas proposed will most likely lead to additional runoff to these facilities. A hydraulic study should be performed to show that the additional runoff will not have an adverse effect on the 100-year water surface elevation in our facilities.
2. Page S-10, Paragraph S.5.1.2, BioSafety Level 3 Facility  
  
This paragraph states that the BLS-3 Facility would provide for environmentally safe and physically secure manipulation and storage of infectious micro-organisms, many of which are potential bioweapon agents. Reference should be made to our enclosed letter, dated August 23, 2002, on the Draft Environmental Assessment for Proposed Construction and Operation of this BLS-3 facility. Since, we have not received the Final Environmental Assessment and this facility

**Alameda County Flood Control and Water Conservation District,  
Jim Horen, Principal Engineer, Advance Planning Section  
Page 2 of 4**

Mr. Thomas Grim  
National Nuclear Security Administration  
United States Department of Energy  
May 27, 2004  
Page 2

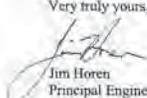
2/35.01 cont. is scheduled to begin operation this year, please note that our primary concern for this facility has not been addressed. Our specific concern is that infectious materials, biotoxins, or pharmaceuticals might reach the groundwater through one of the above pathways identified in the August 23, 2002 letter.

3. Pages 5-2-40, 5-3-33, and 5.4-27, Sections 5.2.9, 5.3.9, and 5.4.9, Volume 1 of Draft LLNL SW/SWP EIS

3/28.01 The document states, "Compliance with an approved erosion and sedimentation control plan during construction would prevent impacts to surface water from construction-induced erosion." Permanent post-construction stormwater management controls should also be included in a stormwater pollution prevention plan, as appropriate, to limit discharge of sediment.

Also, please submit for Zone 7 review all future plans and specifications pertaining to the proposed improvements at the LLNL site and Site 300, and any other pertinent information or studies, to John Koltz, Senior Engineer, Advance Planning.

We appreciate the opportunity to comment on this document. Please feel free to contact Jack Fong at (925) 484-2600, ext. 245, or myself at ext. 400 if you have any questions or comments.

Very truly yours,  
  
Jim Horen  
Principal Engineer  
Advance Planning Section

JH:JFarr

Encl.

cc: Ed Cummings  
John Mahoney  
Dave Lunn  
Matt Katen  
John Koltz  
Joe Seto  
Mona Olmsted  
Jack Fong

*F:\atplan\LLNL-Continued Operations\EIS.doc*

**Alameda County Flood Control and Water Conservation District,  
Jim Horen, Principal Engineer, Advance Planning Section  
Page 3 of 4**



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
5997 PARADISE DRIVE • PLEASANTON, CALIFORNIA 94588-3127 • PHONE (925) 464-1600 FAX (925) 462-0544  
August 23, 2002

Mr. Richard Mortensen, DOE NEPA Document Manager  
United States Department of Energy  
Livermore Site Office, L293  
P.O. Box 808  
Livermore, CA 94551

Re: Draft Environmental Assessment for Proposed Construction and Operation of a Biosafety Level 3 Facility at Lawrence Livermore National Laboratory

Dear Mr. Mortensen:

4/35.01 Zone 7 has completed its review of the referenced NEPA document. Our understanding is that the proposed project consists of the construction and operation of a 1,500 square-foot laboratory facility within the Lawrence Livermore National Laboratory (LLNL) site. The site for this facility is approximately 0.25 acres. It currently consists of paved parking and a road in the vicinity of Building 360 complex.

Our comments are made in the context of Zone 7's responsibilities within its service area to provide wholesale treated water, untreated water for agriculture and irrigated turf, stream management and flood protection, and groundwater management. Zone 7 does not have any existing or planned flood control facilities nor water production/transmission in the project vicinity.

The draft environmental assessment states that wastewaters generated by this facility will be disposed of to the City of Livermore's sanitary sewer system. Municipal sewer systems typically have leaking pipe joints. Also, the City of Livermore recycles a portion of its treated wastewater for turf and landscape irrigation over the Valley's main groundwater basin, and it may also someday store recycled wastewater in one of Zone 7's Chain of Lakes. Our primary concern for this project is that infectious materials, biotoxins, or pharmaceuticals might reach the groundwater through one of the above pathways. Our comments have been organized to follow the order of the draft environmental assessment, as follows:

1. Page 8, Proposed BSL-3 Facility Location and Construction Measures  
This paragraph mentions that the proposed project would be within an existing paved parking area. If construction is contained to the existing paved parking area, a drainage fee for Zone 7's Special Drainage Area (SDA) 7-1 may not be required, since no impervious area would be created. However, if the construction does create new impervious area, it will be subject to SDA 7-1 drainage fees.
2. Pages 22 and 23, Waste Generation at the BSL-3 Facility  
The first paragraph on page 23, states that "soluble or liquid waste materials generated from laboratory operations can be disposed of in the laboratory sinks after first being treated with disinfectants." Please confirm that simple disinfection will be adequate for all constituents of concern. Will disinfection always be performed?

Alameda County Flood Control and Water Conservation District,  
Jim Horen, Principal Engineer, Advance Planning Section  
Page 4 of 4

Allen, Karen  
Page 1 of 1

4 /35.01  
cont.

Mr. Richard Mortensen, DOE NEPA Document Manager  
United States Department of Energy  
August 23, 2002  
Page 2

3. Page 34, Sanitary Liquid Waste and Page 45, Waste Management

This paragraph states that "...liquid wastes as generated from the proposed BSL-3 laboratory operations would be discharged to a retention tank system, for containment, characterization, and disinfection as needed, prior discharge to the sanitary sewer system." Whereas the second paragraph on page 45 states that "There would be no retention tanks or need for waste accumulation areas since no hazardous waste would be produced..." These statements need clarification.

If the liquids are going to go to a retention tank for "containment, characterization, and disinfection as needed" please provide some discussion as to the process which determines whether disinfection is needed. The sentence on page 34 that states "...no discharge limits currently exist for infectious materials which are commonly discharged by healthcare and veterinary facilities and laboratories or homes" does not justify ignoring the need for monitoring, but instead, might point to possible flaws in the existing regulations. Are the potential discharges from a BSL-3 facility the same as those for healthcare and veterinary facilities and laboratories or homes?

4. Pages 39-41, Potential Pathways for Infectious Agents to Escape BSL-3 Containment, Water-borne Transmission

In the paragraph on Water-borne Transmission, page 41, it states "Water exiting through the sink drains would be disinfected, if necessary, and would be diluted by mixing with sanitary wastewater in the sewer system and at the LWRP facility." As mentioned above, what determines whether disinfection will be needed? Will disinfection and dilution be effective for all of the potential constituents of concern? What is the potential for discharge of pharmaceutical pollutants? What is the potential for discharge of resistant strains of bacteria and viruses?

Please feel free to call me at (925)484-2600, ext. 400, or Jack Fong at ext. 245 if you have any questions or comments.

Sincerely,



Jim Horen  
Principal Engineer  
Advance Planning Section

JH:JP:jr

cc: Ed Cummings  
John Mahoney  
Yan Kee Chan  
Dave Lunn  
Diana Gaines  
Matt Katen  
Jack Fong

J:\Mortens\LLNL-Environmental\Facilities

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

Our world is becoming increasingly more dangerous. The nations of the world should be decreasing the number and lethality of weapons, including nuclear weapons, and the U.S. should be in the forefront of that effort. Sadly (embarrassingly), such is not the case.

To my mind, designing new nuclear weapons, when we should be destroying all nuclear weapons, is simply unconscionable. It heads the "What Are They Thinking!" top 10 list for wickedly despicable ideas.

1/04.01

The U.S. is now viewed by other nations as a rogue nation, intent on dominating the world. If we allow ourselves to continue down this path...we simply must NOT continue down this path! We must rejoin the community of nations and work together to make the world a better place.

I care about my children and grandchildren. I want them to have a beautiful world to live in: a nuclear arms race, which will be the result of continued and expanded operations at LLNL, is incompatible with my hopes and dreams for my children.

Please do not do this!

-Karen Allen  
1430 Bel Air Drive, #101  
Concord, CA 94521

**Alliance for Nuclear Accountability, Jim Bridgman, Program Director**  
**Page 1 of 3**

**Alliance for Nuclear Accountability, Jim Bridgman, Program Director**  
**Page 2 of 3**

**Alliance for Nuclear Accountability**  
*A national network of organizations working to address issues of nuclear weapons production and waste cleanup*

**Opposing Lawrence Livermore's Nuclear Revival**  
**Comments on the LLNL Site Wide Environmental Impact Statement**  
 Jim Bridgman, Program Director, Alliance for Nuclear Accountability  
 April 30, 2004

The Alliance for Nuclear Accountability is a national network of over thirty organizations working together to ensure quality cleanup of the nuclear weapons complex while trying to prevent future contamination and health effects by opposing unnecessary nuclear weapons research, development, production, testing, and above all their use.

1/04.01 The Alliance for Nuclear Accountability has long been a champion of public participation and recognizes this opportunity, required by the National Environmental Policy Act, to comment on the Department of Energy's plans for one of the nation's most significant nuclear weapons laboratories. The plans for Livermore contained in this bloated document speak volumes about the intended future mission of the nuclear weapons complex. The term "Stockpile Enrichment," not "Stockpile Stewardship" would more accurately reflect the ambitious and expensive course the Bush Administration have laid out for modernizing the arsenal and weapons complex in ways that far surpass a mission of stewardship for a declining arsenal.

2/33.01, 30.01 DOE's Stockpile Enrichment at Livermore includes plans to increase storage limits of plutonium from 1,500 to 3,300 pounds. What does this mean? Plutonium is about 10 times more toxic than nerve gas. Dispersion of just 3.5 ounces of plutonium could kill every person in a large office building. 3,300 pounds is enough for over 15,000 such dirty bombs and enough for over 500 nuclear warheads. Allowing this kind of material in an area like Livermore that has 20,000 families and a population density of 3,000 people per square mile for the purposes of "national security" is the height of irony and irresponsibility.

3/37.01 In addition to using this plutonium in experiments for the National Ignition Facility and AVLIS, the DOE wants Livermore to develop the production line prototype for a new Modern Pit Facility so it can try to figure out how to make the very messy job of creating plutonium pits, the cores or triggers of modern nuclear weapons, into a less messy one. DOE's plutonium pit production at Rocky Flats was shut down after an FBI raid in 1989 because of dangerous fires and immense environmental contamination costing US taxpayers more than \$7 billion to partially clean up. The DOE wants Livermore to gin up some new plutonium pit production techniques using robotics so it can pretend that making nuclear weapons is not such a big deal, yet making nuclear weapons is, and always will be, a very big deal, whether its done in the United States or any other nation in the world.

(over)

Seattle Office: 1914 North 34th St., Suite 407, Seattle, WA 98103, 206/547-5175, Fax: 206/547-7158  
 Washington, DC Office: 322 4th Street NE, Washington, DC 20002, 202/544-0217, Fax: 202/544-6143  
[www.ananuclear.org](http://www.ananuclear.org) [ananuclear@earthlink.net](mailto:ananuclear@earthlink.net)

5/37.01 cont. Livermore is to help lay the groundwork for a new plutonium bomb plant that will cost taxpayers billions of dollars to construct, hundreds of millions to operate each year, and billions more to clean up. The Modern Pit Facility would, according to DOE plans, produce 125-450 pits per year to maintain a Cold War-sized nuclear arsenal. Yet, the United States is awash in plutonium pits, with over 10,000 intact warheads and another estimated 12,000-15,000 pits in storage at the Pantex plant in Texas. These pits are not falling apart as some Members of Congress claim. Studies by the DOE's own lab scientists have shown plutonium pits are lasting much longer than previously believed.

4/01.01 The United States should be reducing its arsenal, not building new weapons, as agreed to both in the recent Strategic Offensive Reductions Treaty between the United States and Russia and in the mandate to disarm its nuclear arsenals under Article VI of the Non-Proliferation Treaty, a treaty having more participants than any other treaty outside of the United Nations charter, and which the United States affirmed as recently as 2000 during the NPT review conference. Implementing reductions in the stockpile will enable the United States to jettison its older warheads, thus further lowering the average age of the stockpile and further delaying any need for new plutonium pits.

5/02.01 The DOE doesn't just want to ability to produce replacement warheads for a massive arsenal. It wants to have the ability to build new kinds of nuclear warheads, so-called "mini-nukes," new cruise missile warheads and other advanced concepts. Building such weapons could well lead to a resumption of nuclear testing. The production and testing of new types of nuclear weapons would send a crystal clear message to the rest of the world that the United States has no more interest in nuclear arms control unless it means controlling other nations' nuclear programs. We strongly oppose this Administration's vision that would allow the United States to remain an entrenched nuclear power that prioritizes counterproliferation over nonproliferation, the production of weapons of mass destruction above the production of good will through diplomacy.

6/08.02 The Alliance for Nuclear Accountability strongly supports an action alternative for Livermore that seeks an orderly phase-out out its nuclear weapons programs in observance with the Non-Proliferation Treaty and seeks to foster research that is truly beneficial to human health and the environment. This plan, by comparison, is an invitation to disaster, both in the risks it imposes on the Livermore community and in the threat it poses to the global non-proliferation regime. At a time of record budget deficits, the Livermore plan will be charged on the national credit card for future generations to pay, the same generations that will have to pay for the health care and cleanup in and around the Livermore site.

7/03.01

What a waste!

**Alliance for Nuclear Accountability, Jim Bridgman, Program Director**  
 Page 3 of 3

**American Friends Service Committee, Sandra Schwartz, Peace Education Coordinator**  
 Page 1 of 5

**Alliance for Nuclear Accountability**  
*A national network of organizations working to address issues of nuclear weapons production and waste cleanup*

**Key References to Plutonium Pits in the Lawrence Livermore National Laboratory Site Wide Environmental Impact Statement**

**Vol. I, 3-3 (p. 93)**  
 Pit Manufacturing and Certification Campaign—This campaign's mission is to regenerate the nuclear weapons complex capability to produce nuclear primaries. In the near term, the campaign will focus mainly on W88 pit manufacturing and certification, while planning for a modern pit facility that is capable of reestablishing and maintaining sufficient levels of production to support requirements for the safety, reliability, and performance of all forecast U.S. requirements for nuclear weapons.

**Vol. I, 3-9 (p. 99)**  
 The Proposed Action would increase the plutonium material-at-risk limit from 20 to 60 kilograms of fuel-grade equivalent plutonium in each of two rooms of the Plutonium Facility. This increase is needed to meet future Stockpile Stewardship Programs such as the ITP and the casting of plutonium parts. These activities support campaigns for advanced radiography, pit manufacturing, and certification programs.

**Vol. I, 3-14 (p.104)**  
 LLNL fabricates engineering demonstration units to demonstrate the acceptability of different nuclear weapons pit technologies for several weapons systems in the U.S. stockpile. Engineering demonstration units are used to recapture the technology needed to manufacture pits of various types and to develop and demonstrate pit fabrication processes. Under the Reduced Operation Alternative, NNSA proposes to only fabricate engineering demonstration units for half of the pits under the No Action Alternative in the U.S. stockpile.

**Vol. II, Appendix A-75 (p. 110)**  
 Some examples of near-term programmatic enhancements include weapon-type welding and nonnuclear development work, which includes installing a new laser welding system in an existing laboratory, developing and demonstrating engineering demonstration units for different weapon types, and demonstrating a modular system for the modern pit facility foundry, the Livermore Casting and Shaping Technology System, which includes installing a set of modular gloveboxes in an existing laboratory, all tied together with an enclosed transport system designed to minimize worker exposure and reduce potential environmental, health, and safety impacts.

**Vol. II, Appendix A-118 (p.152)**  
 NNSA continues to rely on LLNL to meet its Stockpile Stewardship Program mission objectives. These objectives include campaigns relating to pit manufacturing and certification, advanced radiography, dynamic materials testing, materials shelf life experiments, and enhanced surveillance research. These NNSA-assigned campaigns and programs require continued and increasing use of plutonium. NNSA is working on a long-term solution for disposal of plutonium, but no pathway for LLNL to dispose of excess plutonium currently exists, requiring an increase in the plutonium administrative limits. Therefore, NNSA would increase the administrative limit for fuel-grade equivalent plutonium to 1,500 kilograms [3,306 pounds] from the existing 700 kilograms [1,543 pounds].

Seattle Office: 1914 North 34th St., Suite 407, Seattle, WA 98103, 206/547-3175, Fax: 206/547-7158  
 Washington DC Office: 322 3rd Street NE, Washington, DC 20002, 202/544-0217, Fax: 202/544-6144  
 www.ananuclear.org      anuclear@earthlink.net

May 21, 2004

Mr. Thomas Grim, L-293  
 U.S. Department of Energy,  
 National Nuclear Security Administration Livermore Site Office,  
 SWEIS Document Manager  
 7000 East Avenue  
 Livermore, CA 94550-9234

Dear Mr. Grim:

1/04.01 I oppose the proposed expansion of new nuclear weapons activity at Lawrence Livermore National Labs (LLNL). The specific technical inadequacies of the Site Wide Environmental Impact Statement (SWEIS) are identified and discussed at length. In addition, to the technical inadequacies there are legal and moral reasons to revise these plans. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to comply with our treaty obligations under the Non-Proliferation Treaty (NPT).

2/01.01 "...to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament and on a Treaty on general and complete disarmament under strict and effective international control." (Article VI of the NPT)

3/07.01 In addition, this plan is in direct violation of the advisory opinion of the World court which affirms among other things the obligation to comply with Article VI of the NPT. To continue to pursue the development of new nuclear weapons technologies and capacities renders us, by our own definition, applied to others, a rogue state. It is time to say NO; no to the entire nuclear weapons complex and especially the role of the LLNL within that complex. Instead the alternatives analysis should be revised to consider LLNL's important role in civilian science.

2/01.01 cont. I join my colleagues expression of deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter.

4/31.04 Below, is outlined a number of specific concerns that, taken cumulatively, lead to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and

**American Friends Service Committee, Sandra Schwartz, Peace Education  
Coordinator  
Page 2 of 5**

4/31.04 cont.	re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. The specific concerns are:
5/08.02	<p>1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.</p> <p>2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.</p>
6/34.01 7/33.01, 25.01	3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium,

**American Friends Service Committee, Sandra Schwartz, Peace Education  
Coordinator  
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6/34.01 7/33.01 25.01 cont.	making it evident that these amounts should be decreased, rather than increased.
8/27.01	4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.
9/37.01	5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.
10/26.01 11/26.03	6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.
12/26.04	7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's

**American Friends Service Committee, Sandra Schwartz, Peace Education  
Coordinator  
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12/26.04 cont.	<p>192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.</p>
13/39.01	<p>8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
14/35.01	<p>9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.</p>
15/14.01	<p>10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.</p>
16/22.01	<p>11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.</p>

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17/20.05	<p>12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.</p>
	<p>Sincerely,</p>
	<p>Sandra Schwartz Peace Education Coordinator American Friends Service Committee, PMR</p>

Anderson, Carl  
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DOE/EIS-0348  
DOE/EIS-0236-S3  
Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore National Laboratory and  
Supplemental Stockpile Stewardship and Management Programmatic  
Environmental Impact Statement  
February 2004

Comments prepared by

Carl Anderson  
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April 27, 2004

PREFACE

These comments were prepared before going to Livermore. Comments may be modified on-site.

BIOSAFETY LEVEL-3 (BSL-3) FACILITY

1/01.02

Under international law, offensive uses of biological warfare are completely prohibited. Existing international law has been criticized by many, including the current US administration, who have pointed out that a rigorous, on-demand, transparent inspection regime is necessary to have confidence that such laboratories are not to be used in any way that might facilitate offensive use of biological warfare.

There is an urgent problem with co-locating any advanced biosafety facility at the Livermore site. A BioSafety Level-3 (BSL-3) Facility is proposed. ~~However, As~~ stated on page S-1:

"The primary purpose of continuing operation of LLNL is to provide support for the National Nuclear Security Administration's (NNSA's) nuclear weapons stockpile stewardship missions."

2/02.01

That is, weapons of mass destruction. Furthermore, LLNL is deeply involved in "offensive strike systems, nuclear" (page S-2); and ever since 1945, offensive

Anderson, Carl  
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2/02.01  
CONT.

nuclear strike systems have been fundamentally conceived as a means of escalation of non-WMD war to nuclear war. These fundamental elements of LLNL's primary mission cannot be sustained without a rigorous program of security and confidentiality (opaqueness).

3/35.01  
01.02

It is unlikely, in my opinion, that LLNL will conduct research in offensive uses of biological warfare. However, given the laboratory's record in offensive uses of weapons of mass destruction other than biological, and given the security requirements of a facility whose "primary purpose" is WMDs, I don't see how any objective observer can have full confidence in any inspection regime for anything like a BSL-3 Facility, if it is located at a site with the necessary opaqueness of LLNL. People: Opaqueness and transparency are **antonyms**.

So a BSL-3 Facility at Livermore will not be understood as certainly out of the offensive WMD business. This lack of confidence will significantly undermine the international norm against biological warfare. The environmental consequences of biological war, caused in significant part by location of the BSL-3 Facility at the Livermore site, must therefore be part of a realistic Site-wide Environmental Impact Statement.

PLUTONIUM AVLIS

(Atomic vapor laser isotope separation; page S-iv has typographic error)

4/27.01

Weapons-grade plutonium is not in short supply. Some years back, the National Academy of Sciences did a whole study on what to do with the "surplus" of Pu-239. Its decay is so slow as to be truly negligible from a supply standpoint. I see no reasonable reason for production of weapons-grade plutonium. Furthermore, as demonstrated at Rocky Flats, plutonium vapors are notoriously toxic and difficult to clean up.

Perhaps there are hopes that with Pu of even higher isotopic purity than currently stockpiled, nuclear weapons might be designed to give more hope for victory through nuclear escalation. Those hopes are utterly vain. As Ronald Reagan once said, "A nuclear war can never be won and must never be fought." (As McGeorge Bundy pointed out, perhaps he didn't mean what he said. This fact doesn't change the truth of what Reagan said on that occasion.)

Given these facts, I see no reason whatsoever for the acceptability of Pu-AVLIS.

In scoping of this SWEIS, AVLIS was not originally mentioned. Someone in DOE thought that such an idea could be hidden from view. Perhaps they realized, at some level, that an idea as fundamentally stupid as Pu-AVLIS would not withstand public scrutiny.

-30-

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To: Thomas Grim, Document Manager  
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7000 East Avenue, L-293  
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From: Carl N. Anderson  
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Comments of May 27, 2004 (supplementary to comments of April 27, 2004) on:

DOE/EIS-0348  
DOE/EIS-0236-S3  
Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement  
February 2004

I wish to follow up on my comments (written and oral) of April 27.

1. CRITICALITY AT THE NATIONAL IGNITION FACILITY

1/26.03

The NNSA proposes to use fissile isotopes in the National Ignition Facility. I am quite concerned about criticality there, under conditions of pressure that may occur during NIF operations.

One sense of the idea of criticality is at near-ordinary pressures, which do not greatly compress solids. As examples, in storage and production of the spherical shells at the center of nuclear explosives, and in the production and purification of fissile materials, there are standard procedures to avoid criticality and the intense release of radioactivity associated with it. Livermore Lab has a mediocre record in this regard. It has been decades, I think, since criticality actually occurred at the Livermore site; however, violations of vital safeguards have occurred in recent years at Livermore, and are a fairly serious ongoing concern.

Another sense of criticality is under the pressures produced by chemical explosives, probably augmented by neutron reflectors and tampers. In this sense, criticality is approached at the Nevada Test Site; I find this objectionable.

But my main point here is a different one. The National Ignition Facility produces implosion pressures of enormous intensity, far beyond what is produced by chemical explosives. The NNSA proposes to put fissile isotopes under these pressures, in which the nuclei might be much more densely packed than at near-atmospheric pressures. Will, or will not, these pressures produce build-ups of neutron flux and rates of fission

1/26.03  
cont.

(criticality)? If there is any possibility at all that criticality may occur in the NIF, does Appendix M fully consider the consequences? It would not suffice merely to state that the total energy released by the fissions would be inconsequential. The consideration must include all aspects: The amount of fissioning (whether or not intended), radiation dosing to workers, releases of gaseous fission products, radioactive waste, the political effects of establishing criticality as acceptable behavior by governments, and any other consequences that might occur.

2. MINOR CORRECTION OF QUOTATION

2/27.01

On April 27, I quoted Ronald Reagan as follows: "A nuclear war can never be won and must never be fought." This contains a minor error. A check of the quotation indicates that Reagan's words were: "A nuclear war cannot be won and must never be fought." (April 17, 1982) The two wordings have the same meaning. Even though Reagan "may not have meant exactly what these words say" (McGeorge Bundy, being diplomatic in "No First Use' Needs Careful Study," Bulletin of the Atomic Scientists, v. 38, no. 6, pp. 6-8, June/July 1982), the sense of the quotation is still absolutely correct. I continue to suspect that NNSA's failure to grasp this point underlies Pu-AVLIS.

**Anonymous 1**  
**Page 1 of 1**

1/04.01 | The LLNL has many severe problems arising out of its history and that of the national government. However, there is one overwhelming problem - we have no mission. The cold war is over, we won, pack up - go home. (Note how in your mission question you had to state the mission). Stockpile Stewardship (SBSS) is the new Y2K hoax, a real but relatively small problem blown up to attempt to justify the 'business as usual' atmosphere at the LLNL. NIF is hush money for the test ban treaty; note how it was so important but delays of 5-10 years don't seem to matter. Without a pressing mission we are battered about by trendy movements (Diversity - something the lab knows nothing about, Safety, Security, Computer Security, Personal Security, lie detectors...) without shielding or leadership from management. While I am personally discouraged by the behavior of laboratory management most of us could simply ignore the foibles if we had a clear and meaningful mission. I believe the LLNL management should congratulate us on a job well done in maintaining a credible nuclear defense during the cold war, acknowledge the world has changed, develop the programs to retire and/or transfer employees to Los Alamos, and turn over the facility to California for a new UC, UC Livermore.

2/32.05 | Candor - there are many problems and serious issues at the LLNL - they are barely acknowledged (and this is a marked improvement) by our management. You cannot fix a problem you will not acknowledge. Under the guise of being 'an optimist' or a 'positive person' our management does not admit to failures nor deal with the consequences. For example, ISM is an immense failure - we employees know now - if you get hurt get off site. Reams of paperwork have been generated, the IWS etc. When I reported a legitimate safety concern (road conditions) it was first ignored, when I pressed the system the response degenerated into a pissing contest between departments as to who might pay and for the last two years nothing has been done. When I reported a serious breach of security (assault rifles brought in in visitors vehicles) I was told there would be no investigation because it would embarrass the laboratory. We get Newline, a propaganda sheet which never covers the real issues at the Laboratory (Mike Campbell's departure (which for many of us crushed our hopes for the LLNL's future), the termination of AVLIS, etc). We have Science and Technology Review - a glossy on our claimed successes. As a 25 year employee I never worked on a project which eventually succeeded. Perhaps we should have a glossy on our 'High Risk' ventures and their true outcomes - this glossy could be monthly and mammoth. Finally we have Fitnotes from the folks who can run a Yuppie Toy Store but can't run a daycare facility. Two items symbolize a major laboratory problem. In building 111 the elevators only stop at certain floors; in HR the last time I was there several years ago there was a locked glass door barring access to a number of the offices.

Having seen the LLNL bookmark we devoted ourselves to determining what are the strengths at the LLNL.

1. The retirement system - this is why my contemporaries are staying put. And the pay isn't bad.
2. The best toys - we can order the latest and fastest computers and other toys (opps! - analysis tools) we think we need, money is really no object. Then in September comes 'end of the year' money where we can buy whatever we want whether we need it or not.
3. Low pressure, the deadlines are not real, neither are the budget constraints (look at NIF). We have no time critical missions; we may pay lip service to 'on time, under budget' but we (and our sponsors to some extent) understand the vagaries of high tech, high risk work.
4. Flex time - we can come and go as we please - maybe one week sixty hours, the next week thirty.
5. Education - we can take courses and training is well supported
6. Travel - we can go many places with minimal justification.
7. Job security
8. No matter how bad we screw up there is always Los Alamos.

Q. What is the difference between the LLNL and the Titanic?  
 A. The Titanic had a band.

1/04.01 | The LLNL did help to win the cold war - our contributions were real. That our product was not used is the crowning achievement of mankind in the 20th century. We helped to make this occur. Now we must find a mission of comparable importance for the next century. Perhaps that mission is here at the LLNL, perhaps the mission is to let our people go to where they can be productive. No more 'business as usual'; time for management to give way to leadership.

**Anonymous 2**  
**Page 1 of 4**

1/32.03 | The Space Preservation Treaty (SPT) accompanies the US Space Preservation Act, HR 3657 introduced into Congress in December 2003 by Congressman and Presidential Candidate Dennis Kucinich. The SPT incorporates the best language and intention of previous space treaties and treaty proposals including the ABM Treaty and the 1967 Outer Space Treaty. The SPT is ready to be signed by world leaders into world law at the Space Preservation Treaty-signing Conference in early 2005. It will do the following:

- \*Prohibit the research and development (R&D), testing, manufacturing, production and deployment of space-based weapons and systems, and the use of weapons to destroy or damage objects in space that are in orbit (i.e. satellites). This prohibits the introduction of all operational weapons in space, and the escalation of war on earth from space and in space.
- \*Permit space exploration, R&D, testing, manufacturing, production and deployment of civil commercial and defense activities (including communication, navigation, surveillance, reconnaissance, early warning or remote sensing including asteroid and comet hazard mitigation) that is not related to space-based weapons or systems.
- \*Transform the war industry into a space industry and other industries by removing the mandate to weaponize space while simultaneously allowing the inexorably linked military-industrial-entrepreneurial-lab-university-intelligence-NASA (and other space agencies and organizations)-government(s) complex to continue to expand into space, but without space-based weapons.
- \*Stimulate a new economic package and create a new marketplace as humans evolve from earth into space generating more jobs and education/training programs, and more contracts and profits than during any hot or cold wartime. Space R&D and exploration programs are the foundation for a win-win platform that is feasible and realistic, and that will produce clean and safe Space Age technology, products and services that will be applied, with focus and intention, directly to solving urgent and potential problems of human needs, new energy, and a sustainable environment and development. This will transform the war-based economy, industry and mindset into a Space Age economy, industry, and mindset, creating a new Space Age paradigm (vision of what IS and CAN BE).
- \*Build a strong national and global defense and security system based on bringing the world, including "adversaries" with different cultures and perspectives, together for benefits all. It will get the world's leaders to commit to cooperation and healthy competition through agreements to 1) ban all space-based weapons and 2) apply civil, commercial, military/defense, and entrepreneurial Space Age technology and information services to enhance worldwide cooperation in communication and information exchanges about vital issues of human needs, new energy, and our environment. 3) stop space-based technology being used as "force multipliers" to enhance war capabilities. 4) use space technology to observe earth so that we can preserve our common environment and protect all life, to see where the sick waters are so we can clean them up, to see where suffering people are so troops and civil workers can supply food and medicines, clean water systems and alternative energy sources. 5) provide satellite programs to educate (healthcare, etc.) and eliminate poverty and suffering. 6) apply security based on respect for our unity and diversity, with compassion for everyone on a different place on life's path; 7) bring us together to reap the abundance of benefits and opportunities that will improve life as we recognize we are interconnected earth-in-space species in the universe. 8) Promote Peace on Earth as it is in Space = real security.
- \*Stop the weaponization of space. The Space Preservation Treaty simply removes the mandate to weaponize space and identifies new roles for the militaries and military budgets, for corporations and corporate profits. It will reform and improve intelligence and defense departments to focus R&D, technology, applications and information services to protect humanity, produce new energy and resources and preserve our environment. The SPT will create a Space Age way of thinking. The militarization of space has occurred, but not the weaponization of space.

Anonymous 2  
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Anonymous 2  
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\*Initiate new ways of thinking and acting. The SPT implies that militarization of space is different from militarization on earth. The SPT eliminates operational weapons of mass destruction (WMDs). In fact, the 300 Astronauts, Cosmonauts and specialists report that they surprise each other in space. They cooperate and work as friends on duties and challenges, not as earth adversaries. They seem to be initiating a new era of cooperation beyond their ego-based, fear-based cultures on earth. When the ban on space-based weapons becomes law, humans can evolve with a vision to replace the war mindset and war industry with space industry. In the Space Age we can embrace the concept of eliminating war and developing peace and real security for the militaries, the corporations and people on earth and in space. We can employ Space Age technology and information to bring the world together without weapons. The Space Preservation Act and the World Peace Treaty pave the way to peace on earth.

\*Verify and enforce agreements. When the first twenty U.N. Member Nations sign and ratify the world Space Preservation Treaty it will become world law. And, an important new entity will be formed. A cooperative world Outer Space Peacekeeping Agency will be established and equipped to monitor outer space and enforce the space-based weapons ban. The same Space Age equipment will be applied with the intention—not to enhance war fighting capabilities even under the guise of calling it "defense"—but instead to verify agreements. This includes reducing and eliminating missiles (and eliminating the need for "missile defense"), nuclear weapons, and other WMDs, toxins and polluting technology.

\*Free brains and budgets, hearts and souls to live, work and travel freely together on earth, as well as peacefully in space. For the past 40 years the defense industry and those of several countries have been planning space-based battle stations, pop-up space-based weapons and Star Wars flying shooters and bombers.

Yet IMAGINE! Other NASA futurists and defense analysts have led the way with visions and models of space habitats, schools, hospitals, hotels, resorts, farms, labs, industries, elevators, crafts and telepathic robots beyond Spirit and Opportunity. IMAGINE putting the lid on the war industry! IMAGINE happy, healthy lives filled with culture, music and the arts. IMAGINE air and space travel without intimate wands and taking off shoes. We are evolving the speed and breadth of our intelligence and can think and act in the context of a new Space Age paradigm. We can speak and act with understanding, compassion, and peace and justice for all. We can respect our diversity and different perspectives, acknowledging our interconnectedness, with love and caring that will provide a wonderful, healthy future for our children, for all children and grandchildren, ...and for all life here and beyond.  
But do more than IMAGINE. Get these two SIGNED. THE SPACE PRESERVATION ACT OF HR 3657 AND the world SPACE PRESERVATION TREATY!

1/32.03  
cont.

SPACE PRESERVATION RESOLUTION FOR \_\_\_\_\_ CITY COUNCIL

City Council of the City of \_\_\_\_\_  
Date: \_\_\_\_\_

RESOLUTION NUMBER \_\_\_\_\_

To: The President and Members of the City Council of the City of \_\_\_\_\_

**SUBJECT: ENDORSING THE SPACE PRESERVATION ACT (HR3657) AND COMPANION SPACE PRESERVATION TREATY TO BAN PERMANENTLY THE WEAPONIZATION OF SPACE**

**RECOMMENDATION:** That the City Council of the City of \_\_\_\_\_ pass the attached resolution supporting the US Space Preservation Act (HR3657) and the companion world Space Preservation Treaty, and request that the President of the City Council of the City of \_\_\_\_\_ send letters to our federal representatives urging their support of the Space Preservation Act (HR3657).

**BACKGROUND:** On December 8, 2003, U.S. Congressman Dennis Kucinich (D-Ohio) introduced the Space Preservation Act (HR3657), companion to the world Space Preservation Treaty, into the US House of Representatives. In the words of Congressman Kucinich, "We can take this technology for destruction, for war, and, through this proposal, create a technology for peace. We can create a world where war no longer becomes inevitable. We first have to look to a practical measure, such a measure to stop the weaponization of space. There are so many opportunities for the evolution of our species. There is the possibility of space travel, for commerce, for exploration. That is part of the human spirit. It always has been. And so we have the chance today, launching this effort for peace, through saying, 'There shall be no weapons in space.' But not only that, but to use the legislation as a matrix for a treaty to preserve space which we will ask leaders from all over the world to sign."

Please see attached Resolution.  
**FINANCIAL IMPLICATIONS:** NONE  
**CONTACT ALDERMAN:** \_\_\_\_\_ **Tel:** \_\_\_\_\_

City Council of the City of \_\_\_\_\_

RESOLUTION NO. \_\_\_\_\_

**RESOLUTION IN SUPPORT OF THE SPACE PRESERVATION ACT (HR3657) AND THE SPACE PRESERVATION TREATY TO BAN PERMANENTLY THE WEAPONIZATION OF SPACE**

**WHEREAS,** the Space Preservation Act (HR3657) and the companion Space Preservation Treaty will establish a permanent ban on all space-based weapons, on the use of weapons to destroy or damage objects in space that are in orbit; and the permanent termination of research and development, testing, manufacturing, production and deployment of all space-based weapons; and

**WHEREAS,** the termination of the Anti-Ballistic Missile (ABM) Treaty on June 13, 2002 will permit research, development, testing, manufacturing, production and deployment of space-based weapons, thereby insulating a dangerous, costly, and destabilizing arms race in space, endangering all residents of the City of \_\_\_\_\_, the United States of America and all of humankind, and invading outer space, humanity's weapons-free common heritage, with space-based weapons; and

**WHEREAS,** The US Space Preservation Act, companion to the world Space Preservation Treaty, introduced by U.S. Congressman Dennis Kucinich (D-Ohio), requires the U.S. President to work toward "negotiating, adopting and implementing an international treaty banning space-based weapons and the use of weapons to destroy or damage objects in space that are in orbit;" and

**WHEREAS,** the Space Preservation Treaty will establish an outer space peacekeeping agency to monitor

1/32.03  
cont.

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1/32.03  
cont.

outer space and enforce the permanent ban of space-based weapons; and

WHEREAS, The Space Preservation Act (HR3657) and the Space Preservation Treaty facilitate future public and private investment in clean and safe technology, products and services, and in sustainable non-weapons, expanded civil, commercial and military, world cooperative space ventures, and the consequent stimulation of the national and world economy. The Space Preservation Act (HR3657) and the Space Preservation Treaty do not prohibit activities including space exploration, space research and development, testing, manufacturing or deployment that is not related to space-based weapons or systems, or civil, commercial, or defense activities (including communications, navigation, surveillance, reconnaissance, early warning, or remote sensing) that are not related to space-based weapons or systems; and

WHEREAS, the Space Preservation Act (HR3657) and the Space Preservation Treaty preserve the peaceful, cooperative uses of space for all residents of the City of \_\_\_\_\_ and for all humankind; and

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_:

- 1) THAT IT IS THE WILL OF THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_ THAT THE U.S. SENATE AND HOUSE OF REPRESENTATIVES ENACT AND THE U.S. PRESIDENT SIGN AND ENFORCE THE SPACE PRESERVATION ACT (HR3657); and
- 2) THAT IT IS THE WILL OF THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_ THAT THE U.S. PRESIDENT, INDIVIDUALLY OR AT A SPACE PRESERVATION TREATY CONFERENCE, SIGN THE SPACE PRESERVATION TREATY, AND THAT THE U.S. SENATE RATIFY IT TO PERMANENTLY BAN ALL SPACE-BASED WEAPONS TO PRESERVE THE COOPERATIVE, PEACEFUL USES OF SPACE FOR ALL RESIDENTS OF THE CITY OF \_\_\_\_\_ AND FOR ALL HUMANKIND; and
- 3) THIS RESOLUTION OF THE CITY COUNCIL OF THE CITY OF \_\_\_\_\_ IS HEREBY RECOMMENDED TO BE ADOPTED BY ALL MUNICIPALITIES IN THE UNITED STATES OF AMERICA AND WORLDWIDE

1/32/2004 10:58 AM

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1/32.02

UP to Atomic Bomb Decision  
 UP to Leo Szilard Online

## A PETITION TO THE PRESIDENT OF THE UNITED STATES

**Source:** U.S. National Archives, Record Group 77, Records of the Chief of Engineers, Manhattan Engineer District, Harrison-Bundy File, folder #76.

**On July 17, 1945, Leo Szilard and 69 co-signers at the Manhattan Project "Metallurgical Laboratory" in Chicago petitioned the President of the United States.**

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July 17, 1945

### A PETITION TO THE PRESIDENT OF THE UNITED STATES

Discoveries of which the people of the United States are not aware may affect the welfare of this nation in the near future. The liberation of atomic power which has been achieved places atomic bombs in the hands of the Army. It places in your hands, as Commander-in-Chief, the fateful decision whether or not to sanction the use of such bombs in the present phase of the war against Japan.

We, the undersigned scientists, have been working in the field of atomic power. Until recently, we have had to fear that the United States might be attacked by atomic bombs during this war and that her only defense might lie in a counterattack by the same means. Today, with the defeat of Germany, this danger is averted and we feel impelled to say what follows:

The war has to be brought speedily to a successful conclusion and attacks by atomic bombs may very well be an effective method of warfare. We feel, however, that such attacks on Japan could not be justified, at least not unless the terms which will be imposed after the war on Japan were made public in detail and Japan were given an opportunity to surrender.

If such public announcement gave assurance to the Japanese that they could look forward to a life devoted to peaceful pursuits in their homeland and if Japan still refused to surrender our nation might then, in certain circumstances, find itself forced to resort to the use of atomic bombs. Such a step, however, ought not to be made at any time without seriously considering the moral responsibilities which are involved.

The development of atomic power will provide the nations with new means of destruction. The atomic bombs at our disposal represent only the first step in this direction, and there is almost no limit to the destructive power which will become available in the course of their future development. Thus a nation which sets the precedent of using these newly liberated forces of nature for purposes of destruction may have to bear the responsibility of opening the door to an era of devastation on an unimaginable scale.

If after this war a situation is allowed to develop in the world which permits rival powers to be in uncontrolled possession of these new means of destruction, the cities of the United States as well as the cities of other nations will be in continuous danger of sudden annihilation. All the resources of the

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1/32.02  
cont.

United States, moral and material, may have to be mobilized to prevent the advent of such a world situation. Its prevention is at present the solemn responsibility of the United States – singled out by virtue of her lead in the field of atomic power.

The added material strength which this lead gives to the United States brings with it the obligation of restraint and if we were to violate this obligation our moral position would be weakened in the eyes of the world and in our own eyes. It would then be more difficult for us to live up to our responsibility of bringing the unloosened forces of destruction under control.

2/04.01

In view of the foregoing, we, the undersigned, respectfully petition: first, that you exercise your power as Commander-in-Chief, to rule that the United States shall not resort to the use of atomic bombs in this war unless the terms which will be imposed upon Japan have been made public in detail and Japan knowing these terms has refused to surrender; second, that in such an event the question whether or not to use atomic bombs be decided by you in light of the considerations presented in this petition as well as all the other moral responsibilities which are involved.

**Leo Szilard and 69 co-signers**

Signers listed in alphabetical order, with position identifications added.

1. DAVID S. ANTHONY, Associate Chemist
2. LARNED B. ASPREY, Junior Chemist, S.E.D.
3. WALTER BARTKY, Assistant Director
4. AUSTIN M. BRUES, Director, Biology Division
5. MARY BURKE, Research Assistant
6. ALBERT CAHN, JR., Junior Physicist
7. GEORGE R. CARLSON, Research Assistant-Physicist
8. KENNETH STEWART COLE, Principal Bio-Physicist
9. ETHALINE HARTGE CORTELYOU, Junior Chemist
10. JOHN CRAWFORD, Physicist
11. MARY M. DAILEY, Research Assistant
12. MIRIAM P. FINKEL, Associate Biologist
13. FRANK G. FOOTE, Metallurgist
14. HORACE OWEN FRANCE, Associate Biologist
15. MARK S. FRED, Research Associate-Chemistry
16. SHERMAN FRIED, Chemist
17. FRANCIS LEE FRIEDMAN, Physicist
18. MELVIN S. FRIEDMAN, Associate Chemist
19. MILDRED C. GINSBERG, Computer
20. NORMAN GOLDSTEIN, Junior Physicist
21. SHEFFIELD GORDON, Associate Chemist
22. WALTER J. GRUNDHAUSER, Research Assistant
23. CHARLES W. HAGEN, Research Assistant
24. DAVID B. HALL, position not identified
25. DAVID L. HILL, Associate Physicist, Argonne
26. JOHN PERRY HOWE, JR., Associate Division Director, Chemistry
27. EARL K. HYDE, Associate Chemist
28. JASPER B. JEFFRIES, Junior Physicist, Junior Chemist
29. WILLIAM KARUSH, Associate Physicist
30. TRUMAN P. KOHMAN, Chemist-Research
31. HERBERT E. KUBITSCHKEK, Junior Physicist

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32. ALEXANDER LANGSDORF, JR., Research Associate
33. RALPH E. LAPP, Assistant to Division Director
34. LAWRENCE B. MAGNUSSON, Junior Chemist
35. ROBERT JOSEPH MAURER, Physicist
36. NORMAN FREDERICK MODINE, Research Assistant
37. GEORGE S. MONK, Physicist
38. ROBERT JAMES MOON, Physicist
39. MARIETTA CATHERINE MOORE, Technician
40. ROBERT SANDERSON MULLIKEN, Coordinator of Information
41. J. J. NICKSON, [Medical Doctor, Biology Division]
42. WILLIAM PENROD NORRIS, Associate Biochemist
43. PAUL RADELL O'CONNOR, Junior Chemist
44. LEO ARTHUR OHLINGER, Senior Engineer
45. ALFRED PFANSTIEHL, Junior Physicist
46. ROBERT LEROY PLATZMAN, Chemist
47. C. LADD PROSSER, Biologist
48. ROBERT LAMBURN PURBRICK, Junior Physicist
49. WILFRED RALL, Research Assistant-Physicist
50. MARGARET H. RAND, Research Assistant, Health Section
51. WILLIAM RUBINSON, Chemist
52. B. ROSWELL RUSSELL, position not identified
53. GEORGE ALAN SACHER, Associate Biologist
54. FRANCIS R. SHONKA, Physicist
55. ERIC L. SIMMONS, Associate Biologist, Health Group
56. JOHN A. SIMPSON, JR., Physicist
57. ELLIS P. STEINBERG, Junior Chemist
58. D. C. STEWART, S/SGT S.E.D.
59. GEORGE SVIHLA, position not identified [Health Group]
60. MARGUERITE N. SWIFT, Associate Physiologist, Health Group
61. LEO SZILARD, Chief Physicist
62. RALPH E. TELFORD, position not identified
63. JOSEPH D. TERESI, Associate Chemist
64. ALBERT WATTENBERG, Physicist
65. KATHERINE WAY, Research Assistant
66. EDGAR FRANCIS WESTRUM, JR., Chemist
67. EUGENE PAUL WIGNER, Physicist
68. ERNEST J. WILKINS, JR., Associate Physicist
69. HOYLANDE YOUNG, Senior Chemist
70. WILLIAM F. H. ZACHARIASEN, Consultant

Source note: The position identifications for the signers are based on two undated lists, both titled "July 17, 1945," in the same file as the petition in the National Archives. From internal evidence, one probably was prepared in late 1945 and the other in late 1946. Signers were categorized as either "Important" or "Not Important," and dates of termination from project employment were listed in many cases. It is reasonable to conclude that the lists were prepared and used for the purpose of administrative retaliation against the petition signers.

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Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**

Must be received on or before May 27, 2004.

To  
Ponder:

1/32.02

1) We cannot simultaneously prepare for  
and prevent WTC.

2) War is terrorism with a larger budget.

2/32.04

3) From Gopin Krishna's The Biological Basis of Religion and Genes: p. 9 "Gandhi taught a way of political struggle which ruled out any means not in keeping with the desired goal; he believed that a nonviolent state can be reached only by nonviolent means. But the linear causal manner of technological thinking sharply distinguished between ends and means... The dissolution of reality into a network of causal chains is a mistake. A culture which misunderstands reality that way destroys the very reality it intends to control and improve."

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to: (or "liberate"  
Mr. Tom Grim  
(925) 422-1776  
as in Belluigi's  
tom.grim@oak.doe.gov Inq.)

www-environfo.llnl.gov/

925-422-0704  
877-388-4930

**Balestreri, Joe**  
**Page 1 of 1**

**Barrett867 (email moniker)**  
**Page 1 of 1**

Joe Balestreri  
6568 Lucas  
Oakland, CA 94611

May 20, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/03.01 I oppose the use of my tax money for the creation of weapons of mass  
2/04.01 destruction. This includes the nuclear and biological weapons programs  
proposed for LLNL. The development of these weapons clearly poses a  
significant risk to the people and environment of Berkeley. But more  
importantly, the hypocrisy of the US pursuing these technologies even as  
we condemn and destroy other nations for seeking them undermines our  
credibility and security. They should not be made anywhere.

Thank you,

Joe Balestreri

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

**From:** Barrett867@aol.com [mailto:Barrett867@aol.com]  
**Sent:** Monday, April 26, 2004 2:16 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:** Comment on Livermore lab proposal

1/04.01 Just want to express my disagreement with the proposed changes to the Livermore lab as  
it applies to Plutonium and Tritium, etc. as I am unable to attend any of the public  
hearings to express my concerns.

Thank you.



Baxter, Alex  
Page 1 of 1

Bell, Pastor Bonnie  
Page 1 of 1

Dear Mr. Grim,

I'm writing to oppose the environmental impact statement at Livermore Labs. As a youth living in the Bay Area, I am greatly disturbed by the prospect of increased nuclear weapons production only 30 miles from my home. An increased radiation output impacts the environment more strongly and permanently than any other pollution known to man. I plan to protest at the hearing next week and hope you will seriously reconsider supporting the new procedures.

Sincerely,  
Alex Baxter

1/02.01,  
04.01

2/23.01

Pastor Bonnie J. Bell

552 Dean Creek Rd. #58  
Scotts Valley, Ca 95066  
May 12, 2004

Mr. Tom Grim DOE NNSA L-293  
7000 East Ave.  
Livermore, Ca 94550

Dear Mr. Grim:

I am concerned with the intention to increase the size and scope of the work at Livermore Laboratory. The polluted area already covers a fifty mile radius—this is too much danger to the children and adults. The lab needs to move out of this densely populated area and then attempt to clean up the site.

DO NOT INCREASE LIVERMORE LAB!

Sincerely,  
Pastor Bonnie Bell  
Pastor Bonnie Bell

1/04.01

Berkey, Andrea and Family  
Page 1 of 1

Billings, Susan  
Page 1 of 1

Andrea Berkey  
557 Tyler Avenue  
Livermore, CA 94550

May 3, 2004

Mr. Tom Grim, DOE, NNSA, L-293, 7000 East Ave., Livermore, CA 94550

Dear Sir,

I am a new resident of Livermore. I chose this area because as a new mother I wanted to live in an area that would provide me with a sense of security and future for my new family. I have enjoyed Livermore's pleasant atmosphere, friendly neighbors and local activities. My children enjoy the warm weather and local parks. They love running in the sprinklers in the summer and playing in the rain in the winter.

1/17.04 | Lately however, I have been increasingly nervous about the area in which I live. I am very unsettled  
2/18.02 | by the news I hear regarding Lawrence Livermore Lab. I now question whether living next to a  
3/18.01 | facility that has been known to release radioactive material into the air is wise. I understand that  
Tritium binds to water molecules readily, and thus makes the rain in the area a threat. What about the  
ground water, is the water we drink contaminating our bodies?

4/23.01, | The question of whether or not to allow Lawrence Livermore Lab to increase its stock of hazardous  
30.01 | materials and biological agents, in my mind is mute. How on earth can we justify the potential  
hazards of radioactive, testing, shipping, storing, handling, and waste? Some may say it's for  
National Security, and the common good. Tell me, what good is National Security, if National  
Security is not fighting the everyday threat to our own children's health? Should I think it better to  
have Livermore contaminated by the plague, or sprinkled by radioactive rain showers in the pursuit of  
the common good? Where is my future of health, happiness and realization of the American dream?

Which then becomes of greater importance; the possibility of a terrorist threat or the very real danger  
the lab plays in my children's everyday lives? I now am afraid of the water we drink, the hose that  
my children turn on to play with, and the possibilities of the negative effects to my children's long  
term health. Three older women on my block have suffered from cancer, and four men have been  
diagnosed with Parkinson's Disease. That seems like a pretty high percentage for my area wouldn't  
you agree?

5/35.01 | Please think of my beautiful, smart, healthy children when the decision is made to import these  
biohazards into our community. Remember, Lawrence Livermore lab is in the heart of a wonderful  
strong community, full of vibrant young people who deserve a clean bright future too.

Sincerely,  
Andrea Berkey and Family

Susan Billings  
7433 Lantana Ave  
El Cerrito CA 94530

4/25/03

Dear Mr. Grim,

1/04.01 | I am writing in opposition  
to the Dept. of Energy's recently  
released SWEIS for Livermore  
labs planned operation for the next  
ten years. This plan calls for  
doubling the amount of plutonium  
2/33.01 | allowed for Livermore. It poses  
a threat to the health & safety of  
3/23.01 | all of us living in the bay area.  
This plan also calls for resuming  
4/39.01 | underground testing of nuclear weapons.  
This poses a threat to the entire  
1/04.01 | world, and has the potential to  
cont. | start a new nuclear arms race.  
This is a terrible plan.  
Sincerely, Susan Billings

Blue Ridge Environmental Defense League, Louis A. Zeller  
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**BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE**

www.BREEL.org - PO Box 83 Oracle Springs, North Carolina 28629 - Phone (336) 982-2631 - Fax (336) 982-2854 - BREEL@lykes.com

May 27, 2004

Thomas Grim  
Livermore Site Office Document Manager  
NNSA, MS L-293  
7000 East Avenue  
Livermore, CA 94550-9234  
(925) 422-1776 fax

**Re: (DOE/EIS-0348 and DOE/EIS-0236-S3) Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement, February 2004**

On behalf of the Blue Ridge Environmental Defense League, I write to comment on the Draft Site-wide Environmental Impact Statement for Lawrence Livermore National Laboratory. I have reviewed documents provided by the DOE/NNSA and other data in preparation of these remarks.

These are our most significant findings:

1. Cancer fatalities from accidental release are nearly tripled by the increased volume of radioactive plutonium at the Plutonium Facility outlined in the Proposed Action.
2. In little more than a decade LLNL has increased its need for plutonium by 650%.
3. DOE/NNSA's Integrated Technology Project would begin to produce plutonium and enriched uranium in 2008 for the production of new plutonium weapons.
4. The Nuclear Posture Review cannot rightly be used to justify additional negative impacts on the environment and public health.
5. The DOE/NNSA failed to address the historical impacts of radioactive contamination of the atmosphere caused by activities at LLNL.
6. DOE/NNSA failed to properly take into account information provided in scoping documents.
7. Four facilities have been categorically excluded from NEPA review: The Container Security Testing Facility, Central Cafeteria Replacement, International Security Research Facility, and the Waste Isolation Pilot Plant Mobile Vendor.
8. Waste Transport Risks to the general public are increased by the Proposed Action.
9. DOE/NNSA fails to adequately address additional electric power needs of its Proposed Action in the draft EIS.

1/23.01 We have the following recommendations with regard to the draft LLNL SW-EIS.

1. DOE/NNSA must go back to the drawing board and do a credible assessment of health impacts on the workers and the general public caused by routine and accidental radiation.

Esse quam videri

Blue Ridge Environmental Defense League, Louis A. Zeller  
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Re: (DOE/EIS-0348 and DOE/EIS-0236-S3)  
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1/23.01 cont.

2/02.01.1 exposure caused by Lawrence Livermore National Laboratory.

01.01.2 DOE/NNSA should not pursue the production of new atomic weapons, termed vertical proliferation, which is prohibited by the Nuclear Non-Proliferation Treaty.

3/06.01.3 DOE/NNSA has not sufficiently demonstrated a need for increased environmental impacts and public health risks under all three alternatives; therefore, an overall reduction in operations is the only option under NEPA.

The Nuclear Posture Review is used to rationalize the proposed actions at Lawrence Livermore National Laboratory. We submit that the NPR cannot rightly be used to justify additional negative impacts on the environment and public health because its findings are contrary to international law and treaty agreements ratified by Congress and signed by the President of the United States and are, therefore, constitutional requirements.

4/01.01 DOE developed several goals in its draft NNSA Strategic Plan to achieve its missions to support of the nuclear posture review. The nuclear weapons stewardship goal is to ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile. Achieving these goals requires the continued operation of LLNL.

NNSA has developed strategic objectives to support the DOE strategic goals. The strategic objectives that support the nuclear posture review and relate to the purpose for continued operations of LLNL are listed below:

- Conduct a program of warhead evaluation, maintenance, refurbishment, and production planned in partnership with the U.S. Department of Defense
- Develop the scientific, design, engineering, testing, and manufacturing capabilities needed for long-term stewardship of the stockpile (emphases added)

[LLNL SW/SPEIS, p. 5-3]

Specifically, the Nuclear Non-Proliferation Treaty obligates all nations party to the agreement to reduce nuclear weapons stockpiles, to halt nuclear weapons production, and to end the arms race. It certainly prohibits "design, engineering, testing, and manufacturing capabilities."

**Overview**

Lawrence Livermore National Laboratory (LLNL) is located on an 821-acre site three miles from downtown Livermore, California. Since 1952 LLNL has been operated by the University of California to design nuclear weapons. LLNL originated four weapons systems: the W87 and W62 intercontinental ballistic missile warheads, the B83 bomb, and the W84 cruise missile. LLNL is the site of the National Ignition Facility (NIF) slated to begin operation in 2008. The NIF would do nuclear weapons experiments including fusion ignition, high energy density, and radiation effects.

5/06.01 Alternatives analyzed in this LLNL SW/SPEIS include the No Action Alternative, the Proposed Action, and the Reduced Operation Alternative. We support elements of the Reduced Operation Alternative which actually reduce damage to the natural environment and public health. We do not support the new and expanded activities which are also proposed by the Reduced Operation Alternative.

Esse quam videri

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**Public Health and Worker Safety Would Not Be Protected**

The DOE/NNSA failed to address the historical impacts of radioactive contamination of the atmosphere caused by activities at LLNL. Furthermore, the DOE/NNSA failed to properly take into account information provided in scoping documents. The draft EIS states:

6/23.02 Scoping Comments also indicated that the LLNL SW/SPEIS should evaluate the increased levels of melanoma and birth defects in Livermore, California. An investigation of cancer among LLNL employees did not identify any link between employment at LLNL and increased risk of cancer. Another study found that the cancer rates among children and young adults in the city of Livermore do not differ appreciably from elsewhere in Alameda County. Another study found that birth defect rates in Livermore are similar to the overall rates for the state of California. Therefore, an analysis of the rates for melanoma or birth defects in the city of Livermore was not included in this LLNL SW/SPEIS. (page S-8)

The assumptions in the draft EIS belie the facts. A Clark University study of negative health impacts in the Livermore area, entitled "A Critical Review of an ATSDR Public Health Assessment for Lawrence Livermore National Laboratory," yielded a stunningly different picture.

Two large accidental releases of radioactive gas and water vapor occurred at LLNL which emitted a total of approximately 650,000 curies into the atmosphere. Human error and equipment failures at LLNL were cited as the causes for these accidents. At the time of the first accident, LLNL managers assumed that the plume of radioactive gas would not touch the ground and therefore recorded no quantitative data on the release. A simple gaussian atmospheric dispersion model of the accident performed by engineers at the time could have revealed that this assumption was wrong. But the most damning critique is reserved for the recent health assessment by the Agency for Toxic Substances and Disease Registry (ATSDR) which is charged with assessing health impacts.

7/23.05, 23.01 The ATSDR's draft Public Health Assessment of LLNL shares with DOE/NNSA a similar conclusion: that the radioactive contamination which occurred is not a public health concern. However, as the authors of the Clark University review have shown, ATSDR's assessment is woefully inaccurate.

The [ATSDR] Assessment process was marked by a lack of responsiveness to community concerns, a series of contradictory documents, and very limited attention to establishing a record of what happened in the accidents. . . ATSDR lost its opportunity to serve as an honest broker on these issues and thus departed from its defined public health mission."  
(Perspectives on Nuclear Weapons and Community Health, Russ and Goble, February 2004)

ATSDR ignored models which predicted higher levels of radioactive dose to the public. Independent estimates show three to four times higher levels of exposure<sup>1</sup>. The Agency used the widely discredited threshold hypothesis to estimate zero radiation impacts. Scientific consensus supports the linear model which holds that very low doses of radiation do have an impact. The Clark review concludes:

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The inferences drawn in the [ATSDR] Assessment directly subvert the principle of reducing hazards to a level "as low as reasonably achievable" (ALARA), a cornerstone of the social compact for managing radiological hazards. The impression left by the document is indifference to significant releases of tritium in a populated area and indifference to community concerns.

The DOE/NNSA in publishing their draft EIS appears to follow in the footsteps of the ATSDR's discredited health impact assessment.

The draft EIS states that radioactive pollutants released to the atmosphere would be low under the No Action Alternative, the Proposed Action, and the Reduced Operation Alternative. But the admitted impacts on public health should be considered. The draft EIS states:

S.6.5 Radiological Air Quality  
There are differences among the No Action Alternative, Proposed Action, and Reduced Operation Alternative regarding the potential radiological air quality impacts, all of which would be low. The maximally exposed individual (MEI) would be located due east of the NIF, once the NIF becomes operational. The MEI dose for the Livermore Site under the No Action Alternative would be 0.1 millirem per year. This compares to an MEI dose of 0.13 millirem per year under the Proposed Action and 0.09 millirem per year under the Reduced Operation Alternative. The population dose for the Livermore Site would be 1.3 person-rem per year under the No Action Alternative, Proposed Action, and the Reduced Operation Alternative. At Site 300, the MEI would be located west-southwest of Firing Table #51, the only outdoor firing facility that would use tritium. The MEI dose at Site 300 would be 0.055 millirem per year under the No Action Alternative and the Proposed Action, and 0.054 under the Reduced Operation Alternative. The population dose for Site 300 would be 9.8 person-rem per year under the No Action Alternative, Proposed Action, and Reduced Operation Alternative.

The Clark University independent assessment estimates that 80% of the health impacts from LLNL were accidental; the remaining 20% would therefore be from routine releases. Russ and Goble show that, as a result of the earlier accident, the dose to the "maximally exposed adult was 82 millirem," and the "estimate for a maximally exposed 5-yr old was 134 mrem."

DOE/NNSA must go back to the drawing board and do a credible assessment of health impacts on the workers and the general public caused by routine and accidental radiation exposure caused by Lawrence Livermore National Laboratory.

**Specific Comments on the Draft Site-wide Environmental Impact Statement**

S.5.1 No Action Alternative

8/05.01 The term "No Action Alternative" is deceptive because its implementation would in fact expand operations at LLNL and add 550 plant personnel. This alternative includes the following additional activities: National Ignition Facility, BioSafety Level 3 Facility, Terascal Simulation Facility, Superblock Stockpile Stewardship Program Operations, Container Security Testing, security upgrades, decontamination and decommissioning of some facilities, and the packaging and shipping of over 1,000 drums of radioactive transuranic waste to New Mexico's WIPP. The

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	<p>05/27/2004 15:23 13359822954 BPEIL 1496 87</p> <p>May 27, 2004 Re: (DOE/EIS-0348 and DOE/EIS-0236-S3) Page 5</p> <p>DOE/NNSA is expecting approval of these additional activities to fulfill its obligations under the NEPA but has categorically excluded several from review: The Container Security Testing Facility, Central Cafeteria Replacement, International Security Research Facility, and the Waste Isolation Pilot Plant Mobile Vendor. Others have been issued a FONSI: Terascale Simulation Facility, BSL-3 Facility, and security upgrades. The draft EIS includes the following exemption:</p> <p><b>S.5.1.5 Container Security Testing Facility</b> The Container Security Testing Facility is a planned NNSA facility where an intermodal cargo container can be introduced, with a variety of contents, and evaluated while stationary, moving laterally, being lifted, or being stacked. Various actual or simulated threat materials that could be illicitly introduced to the U.S. for the purposes of terrorists would be loaded in the container along with other contents. These configurations would then be used to challenge the best available detection methods. The construction would start in FY2005. Facility lifetime is 30 years. DOE determined that this facility was categorically excluded from further NEPA review.</p> <p>These facilities and operations at LLNL must not be excluded from further NEPA review and all FONSI's should be reviewed under this draft EIS.</p> <p><b>S.5.2 Proposed Action</b></p> <p>Under the Proposed Action, DOE/NNSA is planning experiments using plutonium, other fissile materials, and lithium hydride for nuclear weapons effects tests at the National Ignition Facility as outlined in A.R. doc VILA-4; therefore, DOE must analyze the reasonably foreseeable environmental impact of such experiments as required under Memorandum Opinion and Order, August 1998 [NRDC v. Peña, Civ. No. 97-936(SS) (D.D.C.)] and 10 C.F.R.1021.314.</p> <p>In November 2002, the NNSA Deputy Administrator for Defense Programs approved proposing experiments on the NIF using plutonium, other fissile materials, fissionable materials, and lithium hydride. NNSA has chosen to use the LLNL SW/SPEIS as the mechanism for complying with the court's instruction to prepare a supplemental SSM PEIS. <sup>2</sup> (S.5.2.1, page S-14)</p> <p>In order to conduct such experiments, LLNL would have to store plutonium on site. In 1992 the DOE estimated 200 kilograms would suffice; in 1999 the capacity was raised to 700 kilograms. Now DOE proposes to increase the storage capacity to 1,500 kilograms. In little more than a decade LLNL has increased its need for plutonium by 650%, an annual growth rate of 108 kg. <sup>3</sup> (S.5.2.2, p. 14) This is a disturbing trend which cannot be justified.</p> <p>Security is touched on briefly. However, the proposed action's security measures are predicated on documents unavailable to the affected public.</p> <p>The Superblock plutonium inventory is stored in robust vaults and no accident scenario involving the material in the vaults is considered reasonably foreseeable. Terrorist acts and Superblock security are considered in the LLNL SW/SPEIS. The information on these accidents is provided in classified or official use only documents. The accidents discussed in the LLNL SW/SPEIS bound the environmental impacts associated with the proposed higher plutonium inventory limit. <sup>2</sup> (S.5.2.2, p. 15)</p> <p>The Proposed Action would triple the amount of plutonium allowed to be used in experimental</p>
9/38.01, 31.09, 05.01	
10/26.02	
11/33.01	
12/30.02, 30.01	
13/33.01	
	Euse quam videre

Blue Ridge Environmental Defense League, Louis A. Zeller  
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	<p>05/27/2004 15:23 13359822954 BPEIL 1496 87</p> <p>May 27, 2004 Re: (DOE/EIS-0348 and DOE/EIS-0236-S3) Page 5</p> <p>processes. If permitted, the risk of latent cancer fatalities during an accident would also increase to 288% of the present risk to plant workers and the general public. <sup>3</sup> The draft EIS states:</p> <p><b>S.5.2.4 Increased Material-at-Risk Limit for the Plutonium Facility</b> The Proposed Action would increase the plutonium material-at-risk limit from 20 to 60 kilograms of fuel-grade equivalent plutonium in each of two rooms of the Plutonium Facility. This increase is needed to meet future Stockpile Stewardship Programs such as ITP and the casting of plutonium parts. These activities support campaigns for advanced radiography, pit manufacturing, and certification programs. If the material-at-risk is increased, the bounding Plutonium Facility accident consequences to the population surrounding LLNL would increase from an aircraft crash resulting in 5.82 x 10<sup>-2</sup> latent cancer fatalities (LCFs) per year under the No Action Alternative to an unfiltered fire involving 60 kilograms fuel-grade equivalent plutonium resulting in 1.68 x 10<sup>-1</sup> LCFs per year under the Proposed Action.</p> <p>A material-at-risk limit is defined as the maximum amount of the referenced material that is involved in the process and thus at risk in the event of a postulated accident. Material locked in secure storage is not considered material at risk.</p> <p>The draft document prepared by DOE/NNSA specifies that this cancer increase is caused by the fissile materials being used in the lab at any given time, not by the total locked in storage. There is no justification offered for thus increasing the real risks of radiation exposure. Indeed, there cannot be.</p> <p>The DOE/NNSA plans an Advanced Materials Program to develop Atomic Vapor Laser Isotope Separation (AVLIS) technology. If AVLIS is successful, the Integrated Technology Project would then begin to produce plutonium and enriched uranium, expected to start in 2008. The stated purpose of this effort is for the production of new plutonium weapons. As stated above, the production of new atomic weapons, termed vertical proliferation, is prohibited by the Nuclear Non-Proliferation Treaty.</p> <p>Waste Transport Risks to the general public are increased by the Proposed Action. The draft EIS states:</p> <p><b>S.5.3.15 Direct Shipment of Transuranic Wastes from the Superblock</b> NNSA is proposing to develop the capability to load transuranic waste into pipe overpacks in the Superblock, beginning in FY2005. These pipe overpacks would allow for significantly higher altitude loading into each drum for disposal at WIPP. The proposed pipe overpack would allow up to 80 plutonium-equivalent curies per drum and up to 200 fissionable gram equivalents. The pipe overpack provides a way for LLNL to dispose of waste, such as plutonium with high americium levels. The pipe overpack can be loaded and stored into Transuranic Package Transporter-II (TRUPACT-II) shipping containers, and shipped from Superblock to WIPP without increasing the nuclear material inventory or hazard levels in other LLNL facilities. The TRUPACT-II shipping containers would be loaded to the limits of the WIPP waste acceptance criteria. <sup>3</sup> (Summary, page S-19)</p> <p>TRUPACT containers testing is inadequate. The tests utilized computer modeling in lieu of actual crash testing. The real world implications for terrorist attacks and accidents have never been properly assessed; therefore, the DOE/NNSA must include a credible transport impact</p>
13/33.01 cont.	
14/27.01	
15/01.01	
16/20.05, 30.01	
	Euse quam videre

Blue Ridge Environmental Defense League, Louis A. Zeller  
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Bock, Jim  
Page 1 of 1

05/27/2004 15:23 13369827954 EPEIL PAGE 08

May 27, 2004  
Re: (DOE/EIS-0348 and DOE/EIS-0236-S3)  
Page 8

The Reduced Operation Alternative would result in smaller routine releases of radioactive tritium to the atmosphere both at the Livermore lab and at the more remote Site 300. The trade-offs posed in the draft EIS would save 50 curies of radionuclide releases to the environment and would not compromise national security.

**S.5.3.7 Reduce Number of Hydrotests at Site 300**  
NNSA proposes fewer detonation experiments containing tritium at Site 300 Firing Tables or the Building 801 Contained Firing Facility, resulting in a reduction in the maximum annual tritium emissions to 150 curies versus 200 curies under the No Action Alternative. Other types of experiments, e.g., environmental testing of explosives assemblies, would continue unchanged from the No Action Alternative in the number of experiments and amounts of tritium. The programmatic impacts of this alternative would include less confidence in the evaluation of nuclear weapons systems.

17/06.01 The Reduced Operation Alternative would discontinue dangerous projects including the Advanced Materials Program and the AVLIS, meaning that laser separation of plutonium and other radioactive isotopes would not take place. Also, the Plutonium Facility Engineering Demonstration System would be mothballed. Ending these experiments would have immediate beneficial effects; as stated in the LLNL SW/SPEIS: "These changes would reduce specific environmental impacts such as transuranic waste generation and worker dose." (S.5.3.1) As further acknowledged in the EIS, LLNL would not reduce safety and security at the site in any case. Whereas DOE/NNSA has not sufficiently demonstrated a need for increased environmental impacts and public health risks, the Reduced Operation Alternative is the only option under NEPA.

Thank you for the opportunity to present these comments. I hereby request to be apprised of any interim or final agency decisions with regards to this action.

Respectfully,  
  
Louis A. Zeller  
Blue Ridge Environmental Defense League  
PO Box 88  
Glendale Springs, NC 28629

Footnotes:

1. A Critical Review of an ATSDR Public Health Assessment for Lawrence Livermore National Laboratory, *Perspectives on Nuclear Weapons and Community Health*, Ross and Goble, February 2001
2. *Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement*, February 2004 (DOE/EIS-0348) and DOE/EIS-0236-S3)

Esse quam videri

Tom Grim, DOE, NNSA, L-293  
7000 East Ave.  
Livermore, CA. 94550

Dear Mr. Grim, 14 May 2004

Most of us would believe that the demise of the former Soviet Union and announced cooperative effort between the United States and Russia and other nations to unite against "terrorism" would signal an era when huge atomic weapons and their delivery systems could be de-emphasized in favor of much smaller conventional weapons with new, high-tech delivery systems allowing for clean, "surgical" strikes. Hogwash.

That's what I say after reading a basic description of the next ten year plan for Lawrence Livermore Labs. Sounds to me like we're revving up bomb production to a new level of insanity.

I always wonder why these things never make headlines. Between the tripling of the amount of plutonium the Lab can handle, restarting the plutonium atomic vapor laser isotope separation program, increasing the amount of tritium used tenfold, and attempting to create controlled thermonuclear explosions in the National Ignition Facility, you're going to have a very hard time convincing me that the Cold War ever ended.

Indeed, I sense the distinct possibility for a very hot war.... and for no good reason. It is entirely unclear to me that a single, thoughtfully detonated nuclear weapon could have saved the World Trade Center Twin Towers from coming down. Nor is it clear to me that a new generation of nuclear weapons will be in the least way an effective counter-terrorism measure.

But even if not a single one of this new generation of weapons which your lab is preparing to develop is ever detonated, the filth used in these endeavors (i.e. plutonium, lithium hydride, etc.) pose enough of a risk to justify the discontinuance of the programs.

We here in Boulder, Colorado have some idea of the mess you're getting deeper into after witnessing the clean up of Rocky Flats going on for years.

Far more than any foreign terrorist attackers sneaking into our country, I fear we are far more threatened by the financial weight and pure filth of our own weapons production systems.

The weapons research and production already going on in your labs is already worse than bad. Why make it worse still?

Yours Sincerely  
  
Jim Bock

1/04.01

**Bohn, Diana**  
 Page 1 of 1

**Booth, Elaine**  
 Page 1 of 1

-----Original Message-----  
 From: Diana Bohn [mailto:nicoa@llnl.org]  
 Sent: Monday, April 26, 2004 8:31 AM  
 To: tom.grim@oak.doe.gov  
 Subject: DOE 10 Year plan for Livermore is a plan for disaster!

Diana Bohn  
 618 San Luis Road  
 Berkeley, CA 94707  
 April 26, 2004

Mr. Tom Grim  
 DOE, NNSA  
 L283  
 7000 East Ave  
 Livermore, CA 94550

Dear Mr. Grim and Department of Energy,

The 10-year plan for Livermore Labs is absolutely appalling!

1/33.01 | 1. More than DOUBLING the limit for PLUTONIUM at Livermore Lab from 1,540 pounds to 3,300  
 pounds, enough to make more than 300 nuclear bombs. As you know, one microscopic particle of  
 plutonium, if inhaled, can cause lung cancer or other diseases. This plan jeopardizes the health & lives of  
 people in the Livermore area.

2/02.01 | 2. A BOMB PRODUCTION PLANT: This SWEIS plan makes Livermore Lab the place to test new  
 technologies for MANUFACTURING PLUTONIUM PITS for nuclear weapons.  
 Whatever happened to disarmament and non-proliferation? There is no other country that even remotely  
 poses a nuclear threat. This kind of wasteful development puts resources in the wrong place as well as  
 threatening to destroy the world. We should be concentrating on healthcare and education, not on nuclear  
 proliferation!

3/39.01 | 3. Preparation for a return to FULL-SCALE, UNDERGROUND NUCLEAR TESTING: This plan also  
 calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale  
 underground NUCLEAR TESTS. This is a dangerous step back to the days of unrestrained nuclear testing.

4/27.01 | 4. REVIVAL of a project that was cancelled more than 10 years ago because it was dangerous and  
 unnecessary. The project is called PLUTONIUM - ATOMIC VAPOR LASER ISOTOPE SEPARATION.  
 33.01 | This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to  
 separate out plutonium isotopes. To do this, Livermore Lab plans to increase how much plutonium can be  
 used in a single room from 44 pounds to 132 pounds - a 3-fold increase. Plutonium - Atomic Vapor Laser  
 Isotope Separation is both a health risk and a nuclear proliferation nightmare.

5/26.01 | 5. Adding PLUTONIUM, highly-enriched uranium and lithium hydride to experiments in National Ignition  
 26.03 | Facility (NIF) megalaser when it is completed at Livermore Lab. Using these materials in the NIF will  
 increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to  
 workers and the environment. We must stop NIF - and these dangerous, new experiments in it. The NIF  
 was a big boondoggle in the first place!

6/34.01 | 6. Allowing the MANUFACTURE of radioactive TRITIUM TARGETS for the NIF megalaser on site at  
 Livermore Lab. Making fusion targets will increase the amount of tritium that is used in any one room at  
 the Livermore Lab from the current limit of just over 3 grams to 30 grams -- a nearly 10-fold increase.

I am extremely upset to learn of these plans!

7/07.01 | Please rethink the role of the Department of Energy! The Department should be concentrating on  
 developing technologies for clean-up and for renewable energy sources!

Sincerely,  
 Diana Bohn

From: "Elaine Booth" <esbooth1@cox.net>  
 To: "Mr. Tom Grim" <tom.grim@oak.doe.gov>  
 Subject: My comments on six dangerous new programs being proposed at Liver more  
 Lab  
 Date: Tue, 18 May 2004 18:09:06 -0700

Elaine Booth  
 3 Winterbranch  
 Irvine, CA 92604

May 18, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

1/02.01 | I write to you because the DOE has prepared a draft Site Wide  
 Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear  
 weapons activities at the Livermore Lab in Northern California. Livermore  
 Lab is working on the design of a new, high-yield nuclear bunker-buster,  
 called the "Robust Nuclear Earth Penetrator," and I oppose its  
 development. Additionally, I oppose the development of so-called  
 "mini-nukes" and other new nuclear weapons concepts being researched at  
 Livermore Lab.

2/07.01 | Instead of proposing new weapons projects, DOE should enhance the  
 peaceful, civilian scientific capabilities and mission at Livermore Lab by  
 proposing new, unclassified programs in environmental cleanup,  
 non-polluting and renewable energy, earth sciences, astrophysics,  
 atmospheric physics and others. The alternative of a "green lab" in  
 Livermore should be pursued instead of the dangerous nuclear weapons  
 future proposed by the Site Wide Environmental Impact Statement.

Sincerely,  
 Elaine Booth

**Boudreau, Drew M.**  
Page 1 of 1

**Bough, Patricia**  
Page 1 of 1

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

**From:** Drew [mailto:peopleschampion@cox.net]  
**Sent:** Monday, April 26, 2004 7:58 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:** No Nuclear or Chemical tests

Mr. Grim,

1/04.01

As a Californian, American and anti-nuclear patriot, I urge you not to go through with the 10-year plan proposed by President Bush's ODE. Nuclear weapons are a threat to all humanity and their existence should be ended as quickly and safely as possible. America cannot continue the nuclear arms race by itself. And chemical weapons are dangerous and have no place in an American army, which has always had a fine reputation for justice and balance, while chemical weapons are torturous to their victims are indisputably cruel. Thank you for your consideration.

Drew Boudreau, Santa Ana, Ca.

Drew M. Boudreau  
PeoplesChampion@cox.net

1/04.01,  
32.04

Dear Tom,

Thank you for this opportunity to express individual feedback on the final LLNL SW/SPEIS. I oppose increased plutonium storage in the Superblock. I oppose increased plutonium material-at-risk limits in two rooms in the Plutonium Facility. I oppose increased Tritium Facility limits. I object to the use of proposed materials on the NIF.

I, as a resident of Livermore and as a US citizen, support scientific research and testing at LLNL for non-nuclear and non-destructive purposes in the human and physical environment only. Towards this goal, I thank you and other employees.

Sincerely,

Patricia Bough  
454 Curlew Rd., Livermore CA 94551  
May 27, 2004

Bournique, Roger  
Page 1 of 1

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

From: ROGER BOURNIQUE [mailto:rbournique@hotmail.com]  
Sent: Wednesday, April 21, 2004 3:03 PM  
To: Tom.grim@oak.doe.gov  
Subject: Development of nuclear weapons

1/02.01,  
32.04

Mr. Grim, please do everything in your power to dismantle all nuclear weapons. Even one is way too many. In this war on Iraq that is the current blasphemy. We have dumped about 350 thousand tons of depleted uranium on Iraq. Our troops and the Iraqi people will be suffering the effects of this for generations to come. This represents nuclear holocaust. I am a Buddhist and have devoted my life to non-violence. I hope you will see that developing any nuclear weapon will only serve to destabilize any chance for peace. The only reason they are being developed, as far as I can see, is to line the pockets of the military defense industries. Please, Mr. Grim, turn away from the development of this dangerous poison. Develop pathways to peace! Very sincerely yours, and hands together in goshho, Roger Bournique

Bournique, Roger  
Page 1 of 1

TOM GRIM  
DOCUMENT MANAGER

DEAR MR. GRIM,

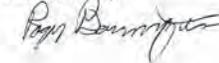
HELLO, MR. GRIM. I AM A BUDDHIST LAYPERSON IN THE NICHIREN TRADITION. I HOPE YOU WILL TAKE A MOMENT TO READ MY LETTER.

1/04.01

I UNDERSTAND FROM WHAT I'VE BEEN READING IN THE PAPER THAT LIVERMORE LABORATORIES WILL BE EXPANDING, AND THE AMOUNT OF PLUTONIUM STORED THERE WILL BE DOUBLED. I FEEL THIS A GRAVE MISTAKE. NOT ONLY ARE THE LABS CLOSE TO MAJOR POPULATION CENTERS, BUT ALSO IN AN AREA THAT IS SEISMICLY ACTIVE. PLUTONIUM IS FAR TO POISONOUS A SUBSTANCE TO BE HANDLED WITH ABSOLUTE SAFETY. I ALSO FEEL THAT THE PRODUCTION OF ANY NUCLEAR WEAPONS OR SUBSTANCES IS MORALLY AND SPIRITUALLY WRONG. THE VERY FIRST PRECEPT IN THE TRADITION WHICH I STUDY AND PRACTICE IS, 'NOT TO KILL.' I MUST DO EVERYTHING I CAN AS A PROVISIONAL, AND INTEGRAL PART OF THIS VAST, DELICATE AND IMPERMANENT HUMAN FAMILY TO SPEAK WITH RESPECT AND NON-VIOLENCE TO THOSE WHO ARE IN A POSITION TO HELP AND MAKE A DIFFERENCE. THERE IS A SAYING THAT ONE CANNOT SIMULTAENOUSLY PREPARE FOR AND PREVENT WAR. THE ONLY WAY WE AS A HUMAN FAMILY CAN ACHIEVE A PEACEFUL WORLD IS TO TAKE THE FIRST STEP AND VOW TO MAKE NON-VIOLENCE A PRIORITY IN OUR HEARTS AND DIRECT THE PEACEFUL PRACTICES TOWARD THE RESOLUTION OF WORLD HUNGER, EDUCATION, CONFLICT RESOLUTION, SAFE AND NON-POLLUTING ENERGY SOURCES. THE LAST BEING SOMETHING YOU WOULD BE VERY GOOD AT, MR. GRIM.

PLEASE MR. GRIM TAKE A MOMENT, JUST A MOMENT TO STEP BACK AND WITH MINDFULNESS, CONSIDER THE OPTION OF NUCLEAR DISARMAMENT AND THE PRODUCTION OF SAFE AND NON-POLLUTING ENERGY RESOURCES, I.E., SUN, WIND, TIDAL, METHANE, AND POSSIBLY HYDROGEN PRODUCED FROM CRACKING WATER. THANK YOU FOR READING MY LETTER, HANDS HELD TOGETHER IN GOSSHO, THAT IS RESPECT.

ROGER BOURNIQUE



**Bouyea, Lauren D.**  
Page 1 of 1

**Bowman, Margaret**  
Page 1 of 2

Dear Mr. Grim,

I am writing in regards to the draft Site-Wide Environmental Impact Statement for the proposed 10-year plans at the Lawrence Livermore National Laboratory. I had the privilege and pleasure to attend the public hearings regarding the proposed changes in Livermore on April 27, and was deeply moved by the eloquence and power of the speakers present. I am writing in accord with those speakers to ask that the plan not be implemented, and that all nuclear weapon creation be phased out at Lawrence Livermore, for environmental, health, security, and ethical reasons.

1/04.01 The lethal effects of nuclear waste and dangerous radioactive materials such as tritium and plutonium are well-documented. Cancer and asthma rates are high in Livermore, as they are in most communities that have been touched by nuclear testing. Livermore wines cannot be sold in Europe because the tritium levels of the wines are three times the European allowable rate. Livermore suffers from air pollution and contaminated water due to the work at the lab. The creation of nuclear weapons threatens Americans' safety for these reasons and also by encouraging other nations to create weapons of their own. By violating the Nuclear Non-Proliferation Act, America sets a poor example for the rest of the world. Instead of being a leader for peace and mature international relations, America uses its disproportionate wealth to create weapons of mass destruction in order to intimidate and incite fear. Livermore Labs is the root source of this action, and if the 10-year plan is implemented, it will only exacerbate an already dangerous situation. This is not a sustainable practice. This cannot last long.

2/07.01 The amazing minds at Livermore should be applied towards finding solutions for dealing with our existing nuclear waste and creating alternative energy technologies that will carry us forward many years into the future. I urge you to reflect on the comments submitted by myself and others with full attention and care, with your mind and heart. What a grave and far-reaching decision lies before you.

Thank you for your time, and peace be with you.

Sincerely,  
Lauren D. Bouyea  
1601 Shoreline Highway  
Muir Beach, CA 94965

*Margaret Bowman*  
*Let ~~the~~ Present the Reality big picture*  
*for the Dept. of Energy*

If the Earth  
were only a few feet in  
diameter, floating a few feet above  
a field somewhere, people would come  
from everywhere to marvel at it. People would  
walk around it, marveling at its big pools of water,  
its little pools and the water flowing between the pools.  
People would marvel at the bumps on it, and the holes in it,  
and they would marvel at the very thin layer of gas surrounding  
it and the water suspended in the gas. The people would  
marvel at the creatures walking around the surface of the ball,  
and at the creatures in the water. The people would declare it  
as sacred because it was the only one, and they would protect  
it so that it would not be hurt. The ball would be the  
greatest wonder known, and people would come to  
pray to it, to be healed, to gain knowledge, to know  
beauty and to wonder how it could be. People  
would love it, and defend it with their lives  
because they would somehow know that  
their lives, their own roundness, could  
be nothing without it. If the  
earth were only a few  
feet in diameter. *Unknown author*

1/02.01 *Ask you eliminate the proliferation of weapons & weapons development at Lawrence Livermore Laboratory accompanied by a program that can lead and highlight countries around world to work for peace & environmental betterment. That the Lawrence Livermore.*

Bowman, Margaret

Page 2 of 2

Boydston, Stanley

Page 1 of 2

4-27-04 apt. 255/26

(My name is Margaret Bowman. I live in the Colland hills)

2/01.01, 08.01 I would speak in support of the Curatorship option, particularly that area in which it support arms control and non-proliferation.

I represent the Ecology group of St. John's Episcopal Church in Colland, and am a founding member of the Regional Episcopal Environmental Commission in S.F.

I object to the national policy that supports the development of nuclear weaponry. The booming effort brings them around and back to have it.

I hope you will consider this reflection a vision of what each can be.

3/02.01 Let me present the really big picture for the D.O.E.

Read the story

Ask the D.O.E. to eliminate, at least the production of nuclear weapons at this time. This request is accompanied by a prayer that our best and brightest scientists find kinder uses in order to work for increased environmental betterment.

Shed the nuclear arms.

From: "Stanley Boydston" <stanley159stanley@cox.net>  
 To: "Mr. Tom Grim" <tom.grim@oak.doe.gov>  
 Subject: My comments on six dangerous new programs being proposed at Livermore Lab  
 Date: Tue, 1 Jun 2004 13:53:30 -0700

Stanley Boydston  
 1328 de la guerra rd.  
 Stanley, ca 95103

June 1, 2004

Mr. Tom Grim  
 DOE NNSA L-293  
 7000 East Ave  
 Livermore, CA 94550

Dear Mr. Grim:

1/02.01 Please publicly oppose any new nuclear agendas other than a complete ban on any kind of nuke use, whether it be for energy or defense! Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01, 26.03 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make

**Boydston, Stanley**  
**Page 2 of 2**

4/26.01 | the NIF more hazardous to workers and the environment. I join California  
 26.03 | Peace Action and the Livermore-based Tri-Valley CAREs in calling for a  
 cont. | close out of the NIF project and termination of plans to use plutonium and  
 other new materials in it.

5/37.01 | 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes  
 Livermore Lab the place to test new manufacturing technologies for  
 producing plutonium pits for nuclear weapons. A pit is the softball-sized  
 piece of plutonium that fits inside a modern nuclear weapon and triggers  
 its thermonuclear explosion. DOE says these new technologies will then be  
 used in a new bomb core factory, called the Modern Pit Facility (MPF). The  
 Livermore Lab plutonium pit program will enable the MPF and production of  
 150 - 450 plutonium bomb cores annually, with the ability to run double  
 shifts and produce 900 per year. This production capability would  
 approximate the combined nuclear arsenals of France and China - each year.  
 I join California Peace Action and the Livermore-based Tri-Valley CAREs in  
 calling for termination of this technology development project.

6/39.01 | 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls  
 for Livermore Lab to develop diagnostics to "enhance" the nation's  
 readiness to conduct full-scale underground nuclear tests at the Nevada  
 Test Site. This is a dangerous step back to the days of unrestrained  
 nuclear testing and I join with California Peace Action and Tri-Valley  
 CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale  
 tests.

7/35.01 | 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab.  
 It calls for collocating an advanced bio-warfare agent research facility  
 with nuclear weapons activities in a classified area at Livermore Lab. The  
 DOE proposes genetic modification and aerosolization (spraying) with live  
 anthrax, plague and other deadly pathogens on site at LLNL. This could  
 weaken the international biological weapons treaty -- and it poses a risk  
 to workers, the public and the environment here in the California  
 alternative" as though it were an existing program -- even though it is  
 not yet constructed. Tri-Valley CAREs has brought litigation against it  
 and a federal Judge has issued a "stay" prohibiting the importation of  
 dangerous pathogens into the facility while the lawsuit moves forward. I  
 join Tri-Valley CAREs in opposing the operation of a bio-warfare agent  
 facility at Livermore Lab.

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will  
 promote a new arms race and escalate the nuclear danger. Further, the DOE  
 proposal to double LLNL's plutonium storage limit to 3,300 pounds and  
 triple the amount held "at risk" in any one room increases the  
 environmental threat LLNL poses to the people of California. The SWEIS  
 propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the  
 peaceful, civilian scientific capabilities and mission at Livermore Lab by  
 proposing new, unclassified programs in environmental cleanup,  
 non-polluting and renewable energy, earth sciences, astrophysics,  
 atmospheric physics and others. The alternative of a "green lab" in  
 Livermore should be pursued instead of the dangerous nuclear weapons  
 future proposed by the Site Wide Environmental Impact Statement.

Sincerely,  
 Stanley Boydston

**Brazil, Mike**  
**Page 1 of 1**

-----Original Message-----  
 From: Mike Brazil [mailto:mbrazil@ttw.com]  
 Sent: Saturday, May 08, 2004 12:29 PM  
 To: tom.grim@oak.doe.gov  
 Subject: Don't bring more poisons into our towns and cities!

It has come to my attention that the Department of Energy and Lawrence Livermore  
 National Laboratory plan to greatly increase production of nuclear weapons components  
 and bring in genetically modified bio-warfare disease agents. Specifically:

- \* Return to full-scale nuclear testing
- \* More than double the plutonium limit at the lab
- \* Manufacture prototype plutonium bomb cores
- \* Shoot laser beams through a plutonium vapor cloud to create a nuclear explosion
- \* Manufacture radioactive tritium targets, multiplying the radiation risk
- \* Import live anthrax, black plague, and other pathogens

Radioactive particles damage every cell in the body and cause inheritable defects. They  
 even damage the steel lab structures. Cancer rates have increased around the lab. It sits  
 between two earthquake faults. Ground water is contaminated. Releases drift across the  
 country.

If anything, the labs should be moved to a safer, non-seismically active location. There is  
 no excuse for putting the public at extreme risk by maintaining operations at the current  
 location. Please reconsider your plans to increase these dangerous activities at Lawrence  
 Livermore and instead move your operation to a location where it does not present any  
 danger to local communities.

Mike Brazil  
 TTW  
 530-274-6593  
 mbrazil@ttw.com

1/04.01

Brechin, Vernon  
Page 1 of 2

Brechin, Vernon  
Page 2 of 2

Tuesday, April 27, 2004

Vernon Brechin  
255 S. Rengstorff Ave. #49  
Mountain View, CA 94040-1734

Mr. Thomas Grim, Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234  
(925) 422-0704

RE: Draft LLNL SW/SPEIS

Dear Mr. Grim:

1/31.02 Thank you for this opportunity to comment on the "Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement" (DOE/EIS-0348, DOE/EIS-0236-S-3), February 2004. Most reviewers would find it impossible to, comprehensively, review the summary booklet and three volumes within the allotted comment period. My comments will cover less than 1% of the issues presented in this multiple component EIS document.

2/08.01 As I expected I ran across many examples of the fine art of omission. Here are just a couple of them. Clearly, the primary driving factor behind this plan is existing administration policy. At the end of Section 1.6.1 it states that scoping comments requested that the LLNL SW/SPEIS should address LLNL activities at other sites, i.e., nuclear weapons activities at the Nevada Test Site. Then it states "(t)hese alternatives were considered unreasonable."

3/07.02 Perhaps that response is related to an estimated \$7.29 trillion of environmental damage that was rendered to the underground nuclear explosion testing portions of the NTS. Most of those tests were performed under the sponsorship of LLNL and LANL. If the present administration has its way this lab will likely resume full-scale testing at the NTS. This LLNL SW/SPEIS needs to address all aspects of the lab's impact on our environment.

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4/26.05 I also noticed some omissions that anyone with a basic understanding of nuclear fission technology should have seen. It appears in Appendix M (NIF) under Section M.5.3.13.1 Radionuclide Materials Management. Table M.5.3.13.1-2, titled Estimated Maximum Mobilizable Radionuclide Inventories (Proposed Action) is very poorly formatted and is missing large numbers of fission product radionuclides. Many of those missing radionuclides can be extremely harmful if released into the general environment. These include key isotopes such as cesium-137 and strontium-90. This type of omission needs to be rectified in many of the LLNL SW/SPEIS's tables and the public deserves an explanation as to why these were omitted and how these omissions damaged the impact analysis that was performed.

5/06.01 I urge the selection of the Reduced Operation Alternative though it fails to address our nation's addiction with nuclear weapons of mass destruction and this alternative fails to comply with the overwhelming sentiment of members of the public that commented on the scope of LLNL's plans.

I will provide further comments later. I hope you will take these and other public comments seriously, even if it requires the creation of a new series of EIS's or a change of existing policy. Thank you again.

Sincerely,  
*Vernon J. Brechin*  
Vernon J. Brechin

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Sunday, May 23, 2004

Vernon Brechin  
255 S. Rengstorff Ave. #49  
Mountain View, CA 94040-1734

Mr. Thomas Grim, Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234  
(925) 422-0704

RE: Draft LLNL SW/SPEIS

Dear Mr. Grim:

1/31.06 Thank you for this opportunity to comment on the LLNL SW/SPEIS. First I must comment on the size of this 3,000+ page document. Under the CEQ regulation, found at 40 CFR 1502.7, it states "(T)he text of final environmental impact statements...shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages." Since enforcement is a non-issue I expect this to be, blatantly, violated.

Much of the key data that is essential to this draft SW/SPEIS resides solely in the massive collection of twelve appendices. The Table of Contents (ToC) in the draft Volume I SW/SPEIS and its Summary booklet failed to list any appendices. The ToC in the final version of both books should list all appendices, including their titles. Those who receive just the Summary booklet, such as the public's elected representatives, deserve to know how much they are missing.

2/26.05 Volume III  
Appendix M - Use of Proposed Material on the National Ignition Facility  
M.3.1 - No Action Alternative  
(M-12, PDF page 446 of 643) (2nd paragraph)

"The manner of operation of the NIF laser and target area building and the laser system would be the same for all of the alternatives and will not be repeated in the Proposed Action and the Reduced Operation Alternative sections."

2/26.05 cont. The Proposed Action will require fundamental design changes to the existing target chamber and will require the design and construction of expensive insertable target chambers, external to the chamber, in the target area building. Details of these design changes should have been presented in the draft SW/SPEIS. They were not. The reconfiguration work of the target chamber will require major changes in operation. In the final LLNL SW/SPEIS the Proposed Action description sections should be completely separated from the No Action and the Reduced Operation Alternative sections.

3/26.05 M.3.1.1 - National Ignitions Facility Operations  
Facility Utility Usage  
(M-13, PDF page 447 of 643) (1st paragraph)

The list of utilities should include the high vacuum system.

M.3.1.2 - Laser Operation  
(M-13, PDF page 447 of 643) (bullet list)

Include another bullet item under the Annual total yield of 1,200 megajoules per year. The new bullet item should provide the total energy usage of the facility of approximately 500,000 megajoules per year.

4/26.03 M.3.2 - Proposed Action  
(M-19, PDF page 453 of 643) (1st paragraph, 2nd half)

More details should be provided about the "other fissile materials" category so the public can determine whether or not LLNL's environmental impact analysis is accurate.

Also, more details should be provided concerning the phrase "specially prepared plutonium."  
If these issues remain classified the SW/SPEIS should clearly state that that is the case, and should specify the specific classification categories, such as Secret, Restricted Data.

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5/26.03	<p>M.3.2 - Proposed Action (M-20, PDF page 454 of 643) (2nd to the last sentence)</p> <p>There would be major differences.</p>
6/26.05	<p>M.3.2.1. - National Ignition facility Experiments (M-20, PDF page 454 of 643) (middle of 2nd paragraph)</p> <p>"These materials would use the same target positioner..."</p> <p>If the final designs of the target positioner and the inner containment chamber are not yet known then the above, quoted, statement is premature. Questions still need to be answered about how the target positioner will enter the sealed inner containment chamber without altering the primary target positioner.</p> <p>Experiments with Plutonium (M-20, PDF page 454 of 643) (2nd paragraph, last line)</p> <p>"Other systems, such as...the liquid helium transfer system, could require modification."</p> <p>This statement appears to conflict with the previous quoted statement which indicated that the positioner would not change. The liquid helium transfer system and positioner are tightly integrated components.</p> <p>Experiments with Plutonium (M-20, PDF page 454 of 643) (1st paragraph, last sentence)</p> <p>The placement of the large target chamber port at the equator or through the bottom involves a major decision. Once that decision is made the actual modification will cost a great deal and will seriously disrupt operations. The public review of the LLNL SW/SPEIS should not proceed until the final design of the insertion port, the inner containment chamber and the target positioner/liquid helium transfer system are completed.</p>

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7/26.05	<p>Experiments with Plutonium (M-21, PDF page 455 of 643) (4th paragraph, middle)</p> <p>"Personnel at the NIF would not be exposed to the materials inside the inner containment vessel."</p> <p>This statement fails to address the fact that the outside of the inner containment vessel will become contaminated from the debris contained in the outer containment chamber. If the experiment causes x-ray ablation of contaminated inner surfaces of the outer chamber then this material will deposit on the inner chambers outer surfaces. The external surfaces, of the inner chamber, will be contaminated by other process while it is sealed in the inner chamber. The SW/SPEIS needs to address more details about the insertion and extraction processes, such as will this involve a decontamination of the insertion port, the outer surface of the inner chamber and a decontamination of the outer chamber's inner surface.</p>
8/26.05	<p>Experiments with Plutonium (M-21, PDF page 455 of 643) (5th paragraph, middle)</p> <p>More details should be provided concerning this "special glovebox" Such details should not be left out for reasons of classification. In short, SW/SPEIS should not proceed until the numerous conceptual plans have reached a stage of advanced design and planning.</p>
9/26.03	<p>Experiments Without Inner Containment Vessel (M-22, PDF page 456 of 643) (1st paragraph, 2nd half)</p> <p>Although, "...many of the isotopes have short half-lives..." many others have long half-lives. Full public accountability should involve an admission that a substantial fraction of the mass of the radioisotopes, that will remain in the chambers during clean-out time, will involve isotopes with half-lives in excess of one month.</p> <p>The statement that many of the isotopes "...are short-lived and would decay..." appears often. Each time it appears it should be balanced with a statement that many others are long-lived.</p>

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10/26.03	<p>Experiments Without Inner Containment Vessel (M-22, PDF page 456 of 643) (Table M.3.2.1-1.--National Ignition Facility Inventories for Proposed Materials)</p> <p>There should be two data columns. One should be the Maximum Inventory mass in grams. The other should be a column that gives the Maximum Inventory activity quantity in curies.</p>
11/26.03	<p>Experiments Without Inner Containment Vessel (M-23, PDF page 457 of 643) (3rd paragraph)</p> <p>Some isotopes are expected to be held on the liquid nitrogen cooled cryopumps while they decay. The SW/SPEIS should describe the relative effectiveness of liquid nitrogen cooled cryopumps vs. liquid helium cooled cryopumps and why the far less effective liquid nitrogen cooling is planned be used. A description is needed that explains what happens when the cryopump loses its coolant flow. The analysis should include an accident scenario where the cryopumps loose their coolant for an extended period of time.</p> <p>Also mentioned here is an accumulation tank. More description of this tank and its intake and discharge systems is needed. Substitute the word "most" with a quantitative value. Also include the number of isotopes that have half-lives of greater than one month. If the cesium-137 and strontium-90 are to be held until they decay explain that the hold period will have to be about 600 years.</p> <p>"Fission products that are solids (very small amounts) would be retained in the target chamber."</p> <p>Substitute the phrase "very small amounts" with a specific estimated quantity, measured in grams and in curies at cleanout time.</p> <p>In the last sentence remove the word "any" since minimizing does not mean eliminating.</p>

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7/26.05 cont.	<p>Personnel Exposure (M-23, PDF page 457 of 643) (1st paragraph, last line)</p> <p>"This would not change from the No Action Alternative."</p> <p>The removal of the inner containment vessel would involve additional, non-routine, decontamination operations in the target building and, after transport, in the Tritium Facility. This, could, easily, result in additional personnel exposures at both facilities. The combined effect should be addressed in the NIF appendix of the SW/SPEIS. Explain how administrative controls could involve increasing the number of personnel exposed so as to keep an individuals personal dose within required limits.</p> <p>Section M.3.2.1, may require another subsection title that reads "Experiments With Inner Containment Vessel."</p>
12/26.06	<p>M.3.2.3 - Waste Generated During National Ignition Facility Operations (M-23, PDF page 457 of 643) (1st paragraph, 2nd sentence)</p> <p>"Because fission products could be produced from some yield experiments, it is expected that there would be a small increase in LLW related to filters."</p> <p>Replace the word "could" with the word "would." Under the Proposed Alternative, many yield experiments would involve fissionable materials to produce a fissile yield. By definition, the yield process always produces fission products. If the word "could" is retained, then LLNL SW/SPEIS editors should explain how that retention serves the public good. Also, quantify the word "small" by adding a percentage increase figure for both curie quantity and radioisotopic mass.</p>
13/26.07	<p>(M-23, PDF page 457 of 643) (2nd paragraph, middle)</p> <p>In addition, to the total volume of the inner containment vessel, specify the inner diameter of the insertion port that will be required. The additional waste stream, that would be added to the Tritium Facility (Building 331), should be fully accounted for in the NIF appendix of the LLNL SW/SPEIS. This waste stream constitutes a cumulative impact of the NIF project and, therefore, all its components should be presented in the NIF Appendix.</p>

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14/26.06 M.3.2.4 - Neutron Spectrometer  
(M-24, PDF page 458 of 643) (2nd paragraph, middle)

"The neutron spectrometer construction would not start before fiscal FY2008 and when completed would become part of the NIF operational facility."

All design, construction, and instrument costs, associated with the neutron spectrometer, should be fully accounted for as a component of the NIF facility. Once the decision is made to begin construction, its estimated operating costs should be projected into the future operating cost of the NIF.

M.3.2.4 - Neutron Spectrometer  
(M-24, PDF page 458 of 643) (2nd paragraph, middle)

M.5 - Environmental Consequences  
M.5.2 - No Action Alternative  
M.5.2.13 - Materials and Waste Management  
M.5.2.13.1 - Radionuclide Materials Management  
(M-49, PDF page 483 of 643) (1st three paragraphs)

The first three paragraphs read as follows.

15/26.05 "Under the No Action Alternative, the NIF would use targets that could contain radioactive materials, including depleted uranium and tritium. The amount of material would vary according to each test.

During the NIF yield experiments, all materials in the target bay would be subject to neutron activation. This would include the target chamber walls, vacuum systems, air handling systems, equipment, shielding, filters, facility walls, roof and floors, room air, and support structures including optics and beam lines. Any particulates, adherent material, and target debris left in the target chamber from previous experiments could, in turn, be exposed to neutrons, energetic particles, debris, and x-rays from subsequent experiments. Neutron exposure from yield experiments would result in some of the material and debris from the previous experiment becoming activated. The particulates would accumulate in the target chamber until the scheduled annual cleanup.

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15/26.05 Exposure to the particulate prior to annual cleanup would be managed to minimize exposure. The radioactive particulates created in the target chamber would be transferred to the decontamination systems and waste streams during cleanup. However, because these are mostly short-lived species, the maximum inventories would be found in the target chamber shortly after the last experiment and well before cleanup. By the time cleaning occurs or components are removed, the radioactive particulate inventory would have decayed to much smaller quantities.

Table M.5.2.13.1-1 lists the prominent radionuclides expected to result from neutron exposure of particulates in the target chamber. The total inventory of activated, mobilizable particulates created in the target chamber would be quite small, but it is included here for completeness. The inventories in Table M.5.2.13.1-1 would be maximum inventories. They would correspond to a final 45-megajoule experiment (maximum credible yield), ending one year of experiments with 1,200 megajoules total yield. The 45-megajoule inventories are used here to bound inventories of activated material."

cont. I found many distortions, errors and omissions in them. They should be changed to read as follows.

Under the No Action Alternative, the NIF would use targets that would contain radioactive materials, including depleted uranium and tritium. The amount of material would vary according to each test.

During the NIF yield experiments, all materials in the target bay would be subject to neutron activation. This would include the target chamber walls, vacuum systems, air handling systems, equipment, shielding, filters, facility walls, roof and floors, room air, and support structures including optics and beam lines. Any particulates, adherent material, and target debris left in the target chamber from previous experiments would, in turn, be exposed to neutrons, energetic particles, debris, and x-rays from subsequent experiments. Neutron exposure from yield experiments would result in some of the material and debris from previous experiments becoming radioactively activated. The particulates would accumulate in the target chamber until the scheduled

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15/26.05  
cont.

annual cleanup. Exposure to the particulates prior to annual cleanup would be managed by interim cleanups and other actions to minimize exposure. Most radioactive particulates created in the target chamber would be transferred to the decontamination systems and waste streams during cleanup. However, because many of the activation products, in the particulates, are short-lived species, the maximum radioactivity inventories would be found in the target chamber shortly after the last experiment and well before cleanup. By the time cleaning occurs the particulate radioactivity inventory will have decayed to much smaller levels.

Table M.5.2.13.1-1 lists the prominent radionuclides expected to result from neutron exposure of particulates in the target chamber. The total radioactivity quantity inventory of activated, mobilizable particulates remaining in the target chamber would be small, relative to the total value of all the induced and debris radioactivity, but it is included here for completeness. The inventories in Table M.5.2.13.1-1 would be maximum radioactivity quantity inventories. They would correspond to a final 45-megajoule experiment (maximum credible yield), ending one year of experiments with 1,200 megajoules total yield. The 45-megajoule inventories are used here to bound radioactive inventories of only the activated particulate material. The table excludes tritium activity, non-particulate activity, plutonium isotope activity and fission product activities.

The draft LLNL SW/SPEIS focus on mobilizable particulates ignores the contribution of many other radioactive sources. These include non-mobile radioactive particulates, radioactive materials fused onto chamber and internal equipment surfaces, radioisotopes driven into surface pores, and radioactive gases, such as tritium, that diffuse into bulk metal components throughout the chamber and vacuum system. The all revisions of the SW/SPEIS should devote far more attention to these issues before a final environmental analysis is made.

Exposure management will require interim cleanup actions and rotating personnel to minimize individual doses, as well as to limit the dispersal of contamination. It is deceptive to suggest that the "scheduled annual cleanup"

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15/26.05 | is the only cleanup action that this SW/SPEIS needs to  
cont. | address.

M.5.2.13.1 - Radionuclide Materials Management  
Depleted Uranium  
(M-49, PDF page 483 of 643) (bottom paragraph)

The third sentence reads:

"Depleted uranium would be used only in nonyield experiments and would not be considered "activated," and no fission products would be produced."

Accuracy demands that it should read:

Depleted uranium would be used only in minor yield experiments and, due to neutron activation the debris that results would contain plutonium isotopes and fission products.

16/26.03

Continuing to not consider these results constitutes a major violation of public trust and may involve a violation of existing law. A portion of the U-235, in the depleted uranium (DU), would fission producing a tiny fission yield and fission products such as Cs-137. Some of the U-238 isotope, that constitute the bulk of the DU, would be transmuted to various plutonium isotopes which will be present in the blast debris. This is basic physics that can not be hidden by clever technical writers. These are issues which the LLNL SW/SPEIS must address in all future public revisions as well as in the Record of Decision (ROD).

If the term "nonyield" is retained then add this term to the Glossary, Chapter 11 in Volume I. It should be defined by a specific threshold of fission yield, as defined by the production of a specific flux of prompt fission neutrons. The term, and definition, should be supported by specific references in public scientific literature.

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17/26.05 M.5.2.13.1 - Radionuclide Materials Management  
(M-50, PDF page 484 of 643)  
(Table M.5.2.13.1.--Bounding Annual Radionuclide  
Particulate Inventories in the Target Chamber  
(No Action Alternative)

The heading of this table should be changed to reflect the limited scope of isotopes shown. This table is, primarily limited to neutron activation products in the small quantity of particulates. Missing, is trapped tritium which could contribute a level of radioactivity in excess of all the figures shown in this table. Also missing is the fission products, such as cesium-137 and strontium-90, that will result from use of DU. Another result of DU use will be plutonium production. This will be a component of the blast debris and must be accounted for in the publicly distributed LLNL SW/SPEIS. Finally, two additional columns should appear on this, and most other, tables that list specific isotope radioactivity quantities in the engineering units of the Curie. One column should provide the mass, in grams, of each of the respective isotopes. Another column should provide the half-lives of the isotopes in units of days. If this table was derived through an unscientific extraction of selected data from a more comprehensive table that is classified secret, then that fact should appear in the table's footnotes. After the missing data is exposed another environmental impact analysis should be performed.

18/26.04 M.5.2.13.1 - Radionuclide Materials Management  
Tritium  
(M-49, PDF page 483 of 643) (1st paragraph)

This paragraph reads as follows:

"Tritium would arrive at the facility in individual targets, containing up to 5 curies each; 2 curies in the capsule and up to 3 curies in the associated hardware. If direct drive were implemented, each target would contain up to 70 curies. The maximum annual tritium throughput at the NIF would be limited to 1,750 curies per year. The in-process inventory limit for tritium for the NIF would total no more than 500 curies at any time."

18/26.04 cont.

If planned NIF target capsule filling operations have shifted from sites external to LLNL to a facility at the lab, then the facility should be identified in the SW/SPEIS. That facility could handle tritium quantities which are in excess of the NIF input quantities listed above. The NIF impact analysis should incorporate any and all impacts associated with any "on campus" target fabrication facilities which may be involved with fabricating target capsules of up to 70 curies of tritium.

Taking into consideration that target capsules may contain up to 70 curies and that the maximum annual tritium throughput at the NIF could extend up to 1,750 curies per year, the estimate, of 30 curies of tritium that could be released during maintenance, may need an upward revision.

Note: The 30 curie value, shown with Table M.5.2.8-3.--Annual Routine Radiological Emissions from the National Ignition Facility (No Action Alternative), is approximately 7,000 times the value shown for activated air production and emissions. The environmental impact analysis should be based upon annual tritium emissions of at least 100 curies. (Table M.5.2.8-3 is at M-44, PDF page 478 of 643)

19/26.04 M.5.2.13.1 - Radionuclide Materials Management  
Tritium  
(M-49, PDF page 483 of 643) (bottom paragraph which continues to the top of the next page)

This paragraph reads as follows:

"Items exposed to tritium are subject to tritium contamination. After an experiment, unburned tritium would be exhausted from the target chamber to the vacuum system and then processed and retained in the tritium collection system. Residual tritium on the first wall surface and on components would be removed during the decontamination process. This would transfer a small amount of tritium to the waste stream. The emissions of tritium are addressed in Section M.5.2.8.4."

It should state something like:

Items exposed to tritium usually are contaminated by

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19/26.04  
cont.

it. After an experiment, a portion of the unburned tritium would be exhausted from the target chamber to the vacuum system and then processed and retained in the tritium collection system. Residual tritium on the first wall surfaces and on internal component surfaces would be, largely, removed during the decontamination process. This would transfer some of the tritium blast debris to the waste stream. The emissions of tritium are not addressed at the end of Section M.5.2.8 - Air Quality, where Table M.5.2.8-4.--Radiological Impacts to the General Public from Airborne Effluent Emissions during Normal Operation (No Action Alternative) appears.

The document writers should supply many missing details. For example, they should state that nearly all the targeted tritium will end up either in the waste stream, as a bulk contaminate of various components such as the NIF chamber and vacuum system, or will be exhausted to the atmosphere. A revised draft SW/SPEIS should provide details of the "tritium collection system."

The first wall panels do not prevent tritium from getting behind them where it will contaminate the rear surfaces of the panels and the inner surfaces of the target chamber. Of course, tritium diffusion will also result in bulk contamination of the target chamber's metal components. Since removal of the first wall panels is only planned for every eight years, tritium contamination will build up over time. The annual attempts to clean all chamber surfaces could prove quite difficult, if not impossible. One result may be that the first wall panel replacement schedule could drop to annually, increasing down-time, increasing NIF operating cost and significantly increasing the volume and mass of the radioactive solid LLW that could be generated.

20/26.06

Section M.5.2.8.4 does not exist as a separate heading in this NIF Appendix N. This should be properly addressed so that a search for the referenced data does not lead to an unrelated topic and data. Radiological impacts on remote, downwind, humans is only partly related to the specific tritium emissions from the NIF facility.

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21/26.05

M.5.2.13.3.1 - Radioactive and Mixed Waste Waste Oils and Associated Equipment (M-56, PDF page 490 of 643) (single paragraph)

The suggestion is made that the oil-free pumps could be used and that would, largely, eliminate the 0.2 cubic meters per year of mixed liquid oil waste (radioactive MLW). This was based upon a 1998 plan (LLNL 1998h). Six years have elapsed since then and the draft SW/SPEIS states that there is still some uncertainty about the technology and the resulting vacuum pump oil volume. By now the purchase decision may have already been made and the pumps may even be in place. There should be little uncertainty remaining. There is no longer a place for idle speculations. Another issue that should be seriously addressed is accountability for underestimating the waste stream volume and radioactivity content. Tritium, fission product, and plutonium contamination may be greater than previously estimated. As a result, several sections of Appendix N and Volume I may need major revisions before a final LLNL SW/SPEIS is issued.

M.5.3 - Proposed Action (M-60, PDF page 494 of 643) (1st paragraph)

The first sentence needs to be completely rewritten by someone with a better understanding of the list of fissile materials that are proposed to be employed. Many of the terms are redundant or repeated. Perhaps a PhD physicist who's known to be good at communicating with the public could be employed for this task.

4/26.03  
cont.

The last two sentences should provide more details. For example the term "small" should be defined in terms of the maximum mass and radioactive quantity for experiments that avoid the use of an inner containment vessel. Also, the phrase "specially prepared" requires more explanation. If this is classified information, a legal basis should be cited. The final sentence states that the sealed inner containment vessel is intended to protect the target chamber. Finish this paragraph with a sentence like: The inner containment vessel is intended to protect the target chamber the first wall panels and the vacuum system from contamination by the increased quantities of plutonium and fission products that would be produced under the Proposed Action plan.

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22/26.03	<p>M.5.3 - Proposed Action (M-60, PDF page 494 of 643) (2nd paragraph, middle)</p> <p>If other highly radioactive actinides are used the new environmental impacts are supposed to remain within the existing bounds. This can't be evaluated by the public since so little information has been provided on this topic and since it appears the existing analysis is, seriously, flawed.</p>
23/26.03	<p>M.5.3.8 - Air Quality M.5.3.8.4 - Radiological Air Quality (M-64, PDF page 498 of 643) (2nd paragraph, 2nd half)</p> <p>Transporting NIF radioactive effluents to the LLNL Tritium Facility and then releasing them there appears to be something of a shell game. If these effluent releases are not accounted for as part of the NIF project then this constitutes a violation of the spirit, if not the letter of the NEPA law. Any revisions of the LLNL SW/SPEIS should include the NIF experiment radioactive product releases, at the Tritium Facility, as part of the NIF SPEIS.</p>
24/26.03	<p>M.5.3.8.4 - Radiological Air Quality (M-64, PDF page 498 of 643) (3rd paragraph) (This is followed Table M.5.3.8.4-1 on the following page)</p> <p>The first sentence reads:</p> <p>"The fission product inventories created in the target chamber from plutonium experiment neutron activation would be bounded by the highly enriched uranium fission products routinely released and listed in Table M.5.3.8.4-1."</p> <p>The above sentence needs to be rewritten so it makes more sense. Fission products, are not produced by the process that is commonly referred to as neutron activation. Apparently, LLNL's contract writers have little familiarity with this subject and LLNL's SW/SPEIS review oversight process is not up to the task of catching such fundamental errors.</p>

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24/26.03 cont.	<p>The term bounded is a vague way of saying is greater than. It detracts from the public's understanding of the issue. The radioactive quantity of fission products, produced by a speculated 60, high yield, U-235 fission experiments per year is bound to exceed the production of fission products from far fewer, very expensive, Pu-239 experiments per year. The suggestion that the annual plutonium fission product production inventory is less than the annual air effluents release inventory for the uranium fission products, is worse than trying to compare apples and oranges. The public can not evaluate this for several reasons. One reason is that hard data, on the proposed plutonium experiments, is largely absent. Another reason is that trying to compare this with the U-235 fission data is meaningless considering that the isotopes, presented in Table M.5.3.8.4-1, are only a carefully selected subset of a much larger group of fission products. It appears that most of the iodine isotopes are shown because charcoal beds are highly effective in trapping it. This presentation shows a large reduction in this element due to the use of a charcoal bed. Numerous isotopes may be listed in the table to add fluff. These are short-lived isotopes which show a zero for their quantity. A third reason is that many plutonium fission yield experiments will be conducted within an inner containment vessel which will be transported to the Tritium Facility where the experiment products will be sealed for shipment to the Nevada Test Site for burial and where a tiny fraction may escape to the local atmosphere. Releases here are not treated as a component of the experiment releases at the NIF site.</p>
25/26.05	<p>Table M.5.3.8.4-1 should include a third column containing the half-lives of the listed elements. Another footnote should be added that specifies that the table is based upon equally spaced experiments, beginning one year before the derived integrated values.</p>
26/26.06	<p>M.5.3.8.4 - Radiological Air Quality (M-64, PDF page 498 of 643) (4th paragraph, last sentence)</p> <p>This sentence should be removed or should reflect the contents of table footnote b. Apparently, data was removed from this table prior to presentation to the</p>

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	public.
	M.5.3.13 - Materials and Waste Management (M-68, PDF page 502 of 643) (2nd paragraph)
	Add to this paragraph the following sentence.
	Change the first sentence to read - Particulates would be generated in the target chamber or in the inner containment vessel from each experiment.
	Then follow with a few new additional sentences that read -
27/26.03	In addition to mobile particulates, there will be non-mobile particulates, particles fused to chamber and window surfaces, as well as particles buried in pits and cracks. Blast debris gases will diffuse throughout the large chamber and vacuum system. Radioactive tritium will diffuse deep into the bodies of all these systems, as well as into the target positioner metals and other instruments located in the target chamber. In the case of experiments conducted with the an inner containment vessel, the single experiment blast debris is likely to remain in the vessel but its outer surface may become contaminated due to contaminates that remain in the main target chamber. In addition to the blast debris gases and solids, the high flux of neutrons will generate radioactive activation products in many materials and gases found throughout the target bay area.
28/26.03	Section M.5.3.13.1 needs to be greatly expanded to account for all these forms of radioactivity in the NIF target bay area and in the LLNL Tritium Facility glove box room where the sealed inner containment vessels will be breached.
	M.5.3.13 - Materials and Waste Management M.5.3.13.1 - Radionuclide Materials Management (M-68, PDF page 502 of 643) (1st paragraph, middle)
29/26.06	Remove either the phrase "fissile materials" or "fissionable" materials. They are redundant and suggest the contract technical writers don't understand the topics they are writing about. If they are not redundant then add the phrase fissionable to the Glossary in Volume I. Also, expand the list of "Fissile" materials under
	17

Brechtin, Vernon  
Page 18 of 24

	that phrase in the Glossary.
29/26.06 cont.	In the last sentence make the term "wall" plural since the chamber contains many wall surfaces, including the first wall panels. Also, mention that the tritium will result in bulk contamination of the chamber vacuum system. Replace the word "onto" with the word "into."
	M.5.3.13.1 - Radionuclide Materials Management (M-68, PDF page 502 of 643) (2nd paragraph, 2nd half) (referenced to Table M.5.3.13.1-1 on paper page M-70, PDF 504 of 643)
	The last two sentences should be rewritten to reflect the data this table actually contains. It only contains listings of the radioactivity quantity for the fission source materials that will, primarily, wind up in particulates in the target chamber or in the inner containment vessel. The last sentence states these values involve an accumulated total for a full year of operation. The figures for the uranium experiments do reflect the quantities of uranium used. The figures for the plutonium experiments reflect the use of these materials for a single experiment.
30/26.03	At the bottom of the table is a mass figure for the inner containment vessel particulates. This item is not described in the notes and it may have been added later. It appears to be unrelated to the mass of plutonium used and may simply represent the estimated radioactive blast debris resulting from a single experiment in an inner containment vessel. I could also represent the total debris that might result from one year of testing using the inner containment vessel. The source of the 225 gram figure needs to be explained, considering that the target fuel mass per shot is from 1 to 3 grams.
	The mass figure for the accumulated total particulates in the target chamber is not provided in this table. It should be. Its value could be over a kilogram. This should then be contrasted with the LLNL SW/SPEIS statement saying that the particulate debris inventory would be quite small.
	The title of Table M.5.3.13.1. should be changed to reflect the limited data it contains. Readability would be improved by some reformatting to separate the Highly
	18

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30/26.03  
cont.

enriched uranium heading from the bottom of the Depleted Uranium section. The inner containment vessel plutonium experiment sections should be clearly labeled as single experiment values and not annual integrated values. The total mass of all blast debris particulates generated after a first year of 1,200-MJ operation should be provided for inner containment vessel and for the target chamber. Finally, another column should be provided that list the, corresponding mass, in grams, of each of the isotope curie values.

Alternately, the table should be expanded to reflect the details that the title suggests. This would involve listing at least seventeen fission product isotopes, including cesium-137, strontium-90, krypton-85, antimony-125, promethium-147, europium-155, ruthenium-106, cerium-144, tin-123, tellurium-127m, zirconium-95, yttrium-91, strontium-89, cadmium-115m, ruthenium-103, tellurium-129m, and cerium-141. These are not the short-lived isotopes the NIF promoters feel driven to frequently mention in this environmental impact statement. The shortest lived isotope, in my list, has a half-life of 32 days.

The table should also list tritium as a particulate contaminate and it should provide a representative sampling of at least eleven neutron activation products such as beryllium-7, chromium-55, iron-55, iron-59, nickel-63, nickel-59, nickel-65, copper-64, molybdenum-93, niobium-98, and gold-198. The activation products that will result from the lengthy list of tracers, found in the table footnotes, should be mentioned.

At the end of footnote "a" of Table M.5.3.13.1-1 is the following statement.

"Trace quantities of solid fission products would also be produced; they are not included here because of their very small impact."

31/26.03

The next LLNL SW/SPEIS that is issued should prove the validity of this statement by exposing the isotopes, that I have just listed. The name of the person who made this decision should be included under such statements. If this data has been withheld because it is considered classified data, then a legal citation should be provided that specifically exempts this information from being

31/26.03  
cont.

made public. The public must be provided with a full set of data so that they can determine if the internal analysis was accurate and done properly.

This table and some of the following isotope tables appear to represent a classic case of the lab pulling the wool over the eyes of the public. Table M.5.3.13.1-1 only provides some starting point data, upon which the environmental impact was calculated. No clues are given concerning the internal lab decisions that finally led to the conclusions that the public impacts would be minimal. The cultural system that has driven this analytical process must change.

M.5.3.13.1 - Radionuclide Materials Management (M-68, PDF page 502 of 643) (3rd paragraph, 2nd half) (referenced to Table M.5.3.13.1-2 on paper page M-73, PDF 507 of 643)

The first sentence reads-

Particulates created in the target chamber would see neutrons from yield experiments and be subject to neutron activation.

32/26.06

It should read-

Particulates resulting from target explosions and other highly energetic processes would be irradiated by neutrons from yield experiments which would result the generation of neutron activation products that are often radioactive.

The second sentence reads-

Fissile and fissionable isotopes would also be subject to fission.

It should read-

Fissionable isotopes, contained in particulate particles could fission upon exposure to the neutrons of following yield experiments.

Brechin, Vernon  
Page 21 of 24

Table M.5.3.13.1-2. lists the prominent nuclides expected to result from neutron exposure of target materials in the target chamber.

To more accurately reflect what is contained in this highly deficient table, it should read-

Table M.5.3.13.1-2 lists seven carefully selected small subsets of radioactive nuclides expected to remain or result from neutron exposure of target materials in the target chamber and in the inner containment vessels.

The radioactivity values, for experiments conducted without the inner containment vessel, are based upon the end of the first year run with 60 experiments at 20 MJ each which ends with a 45-MJ fusion yield experiment. The values, for an experiment conducted with the inner containment vessel, are based upon a single experiment using 1.0 g of weapons-grade plutonium (with yield) when subjected a 45-MJ fusion yield. According to the notes, the upper radioactivity limit for all experiment types is based upon the figures presented for the Highly enriched uranium experiments.

The table contains a collection of seven sets of data which are only loosely connected and that contain many inconsistencies. The fifth through the seventh data set values are based upon a different time frame than the first three data set values. The table requires some formatting to separate the three groups or an effort should be made to break it up into several tables. If the table is to be retained then there needs to be additional footnotes added to provide more details about what each section is supposed to represent. This should include quantitative values for the time frames that they represent. In conclusion, it appears that the data was hastily extracted from other reports and then thrown together without any sort of critical review.

M.5.3.13.1-2 - Radionuclide Materials Management (M-68, PDF page 502 of 643) (3rd paragraph, 2nd half) (referenced to Table M.5.3.13.1-2. on paper page M-73, PDF 507 of 643)

The fourth sentence in the third paragraph states that the table includes tritium gas. This highly radioactive gas is not present in the table. This gas is often

Brechin, Vernon  
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34/26.04  
cont.

responsible more radiation than any of the other radionuclides after a short decay period has occurred. Future LLNL SW/SPEISs should include tritium in the table. The environmental impact analysis must take this into account along with all the other radionuclide debris and activation products that result from the proposed experiments. The last sentence states that the tritium gas will be removed by the high-vacuum cryopumps. This refers to trapping the isotope on a cold surface. When refrigeration is lost the gas escapes into the rest of the vacuum system. This process needs to be described and analyzed in a revised draft version of the SW/SPEIS. The current report only mentions liquid nitrogen cooled cryopumps or traps. Typically, such pumps are not considered high vacuum pumps and they are far too warm to trap tritium. A revised draft SW/SPEIS will need to describe how effective trapping of the tritium is to be accomplished.

35/26.03

In Table M.5.3.13-1-2. are lists of the solid target fuels followed, mostly, by two radioactive noble gasses and by volatile radioactive iodine. Except for the solid source materials, the particulates will contain little of the listed isotopes. The vast majority of the radioactivity in the particulates will come from numerous radioisotopes which are missing from this table. I have listed many of them above. A revised SW/SPEIS should provide a full accounting of these isotopes for each of the five experimental conditions listed in the table. Each radioisotope should be followed by three values, its half-life, the radioactivity level in curies, and the mass that that curie level represents in grams. Additionally, the activity level should be specified for a specific time after the first experiment begins.

36/26.03

The section of Table M.5.3.13-1-2. is headed "Inner containment vessel particulates." This appears to be a listing of activation products that are likely to be found in the particulates. No explanation appears that suggest which containment vessel section this might be associated with. This separated list raises the question as to whether these same isotopes might be associated with the main target chamber and what the curie values would be for the accumulated particular particulates that would be found in that space. I noted that many of the listed activation products have fairly short half-lives. If a full set of activation products,

Brechin, Vernon  
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36/26.03  
cont.

fission products, source materials and tritium listed under each of the five experimental scenarios then I believe a very different picture would emerge regarding the environmental impacts of NIF operation.

M.5.3.13.1-2 - Radionuclide Materials Management (M-68, PDF page 502 of 643) (4th paragraph, which continues on paper page M-69, PDF page 503 of 643)

The fourth sentence, in paragraph four, reads-

By the time cleaning occurs or components are removed, the radioactive particulate inventory would have decayed to much smaller quantities.

The public needs to ask, are they referring to small subset of the particulate radioisotopes that they have chosen for their short half-lives? Also, how much smaller are they talking about? I believe the term inventory has been distorted to confuse the general public. A revised draft LLNL SW/SPEIS needs to be issued. In its Volume I Glossary the phrase "radioactive particulate inventory" should be defined based upon the way it is used in this EIS.

In closing I must make a few comments on a couple of the other projects in the Proposed Action Alternative.

37/27.01

The Integrated Technology Project in the Plutonium Facility should not be conducted and the equipment should be disassembled under international inspection. It violates the spirit of the Non-proliferation treaty and its safety is overestimated by LLNL insiders who control most of the information on this project. What has been released to the public, in this draft LLNL SW/SPEIS, is a joke, and only happened as a result of potential legal actions. The basic equipment operated under a different name in the past before funding was dropped. Its past history, including the name and the reasons for the project termination need to be addressed in future versions of this SW/SPEIS. That means all aspects of the history including the portions that LLNL feels is not worth telling. What was presented in this draft SW/SPEIS was an internal pitch for the technology and little else. This served as a cover for the fact that most of the

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Brechin, Vernon  
Page 24 of 24

37/07.01

background data remains classified so truly independent analysis is impossible.

38/04.03

The plan for the Petawatt Laser Prototype should be put on hold until the public is provided more information on the uses it is funded for and on why the previous petawatt laser was not the prototype. Questions need to be answered as to what the fate of the previous laser was. If it was shipped off to another facility, then why can't it be shipped back to LLNL in order to forgo the construction of a very expensive, new instrument?

39/06.01

LLNL could brighten its future considerably if it could only learn to become far less dependent on the concept that threatening the planet with credible weapons of mass destruction is an essential component for this nation's survival.

I urge NNSA to choose the Reduced Operation Alternative since it represents a tiny step in the correct direction.

Sincerely,  
*Vernon Brechin*  
Vernon Brechin

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Brooke, Lindsay  
Page 1 of 1

Browning, Virginia  
Page 1 of 1

Dear Mr. Tom,

I hope this reaches you in time as you see the pattern  
 4/08 - 4/08 - I hope I have you will consider my comment  
 I read the following info from an e-mail from the  
 Peace Center I belong to - all I can say is there is absolutely  
 & total madness & insanity that if what are you all  
 thought - what is the purpose of all this? It helps  
 feel as though the planet is in the formal & whole  
 DOE and Livermore Lab plan to:

- More than double the plutonium limit at the lab from 1,540 to 3,300 pounds. One microscopic particle of plutonium, if inhaled, can cause lung cancer and other diseases.
- Manufacture prototype plutonium bomb cores (pits) on site. The projected production of 150 - 900 bomb cores would exceed (annually) the combined nuclear arsenals of France and China.
- Heat plutonium and shoot multiple laser beams through the vapor cloud, in an attempt to create a nuclear explosion. This will increase hazards to workers and the environment.
- Manufacture tritium targets (radioactive fuel pellets). This will mean an increase the amount of tritium allowed to be used in any one room at Lawrence Livermore from the current limit of just over 3 grams to 30 grams (a nearly 10-fold increase). This will increase the amount of airborne radioactivity emanating from Livermore Lab. The Lab has a history of uranium accidents, spills and releases.
- Undertake a speedy return to full-scale nuclear testing. The plan calls for Livermore Lab to develop diagnostics to enhance the nation's readiness to conduct full-scale underground nuclear tests, a dangerous step back to the days of unrestrained nuclear testing.
- Import live anthrax, plague and other pathogens, co-locating a bio-warfare agent research facility with nuclear weapons. The plan proposes genetic modification and aerosol spraying with live anthrax, plague & other pathogens, which could weaken the international biological weapons treaty. It also poses an additional risk to workers, the public and the environment.

There is already an increase in cancer rates around the Lab. Furthermore, the Lab sits on two earthquake faults.

Please, please please do not encourage or allow this irresponsible agenda to happen!

Sincerely  
 Lindsay Brooke

1/04.01

Dear DOE:

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility," fissioning plutonium in the NIF mega-laser; and, vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

Signed: Virginia Browning  
 Address: 362 Conover St, Oakland CA 94618

1/01.01  
 2/04.01  
 3/07.01

RECEIVED MAY 03 2004  
 Mr. Tom Grim  
 DOE, NNSA, L-293  
 7000 East Avenue  
 Livermore, CA 94550

Please heed the public comments in the draft EIS.

Buchanan, Pat  
Page 1 of 1

Buck, Constance E.  
Page 1 of 1

1/03.01 | *Which path is a safer world?*

*Health care coverage for 9 million children \$16 billion  
one year nuclear weapons program*

*Save 11 million lives world wide by preventing \$38 billion  
infectious diseases*

*1/03.01 - U.S. current military*

*Pat Buchanan  
Fox News*

*May 14, 2004*

Dear DOE: **PLEASE READ!**

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF mega-laser; and, vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

**AMERICAN WMDs MUST BE OUTLAWED, TOO.**

1/01.01 | I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our

2/04.01 | environment. I call on you to analyze conversion

3/07.01 | of the Lab to peaceful purposes as an alternative.

Signed: *Constance E. Buck*

Ms. Constance Buck  
Apt 547  
1100 NE Mississippi  
Portland, OR 97211-3486

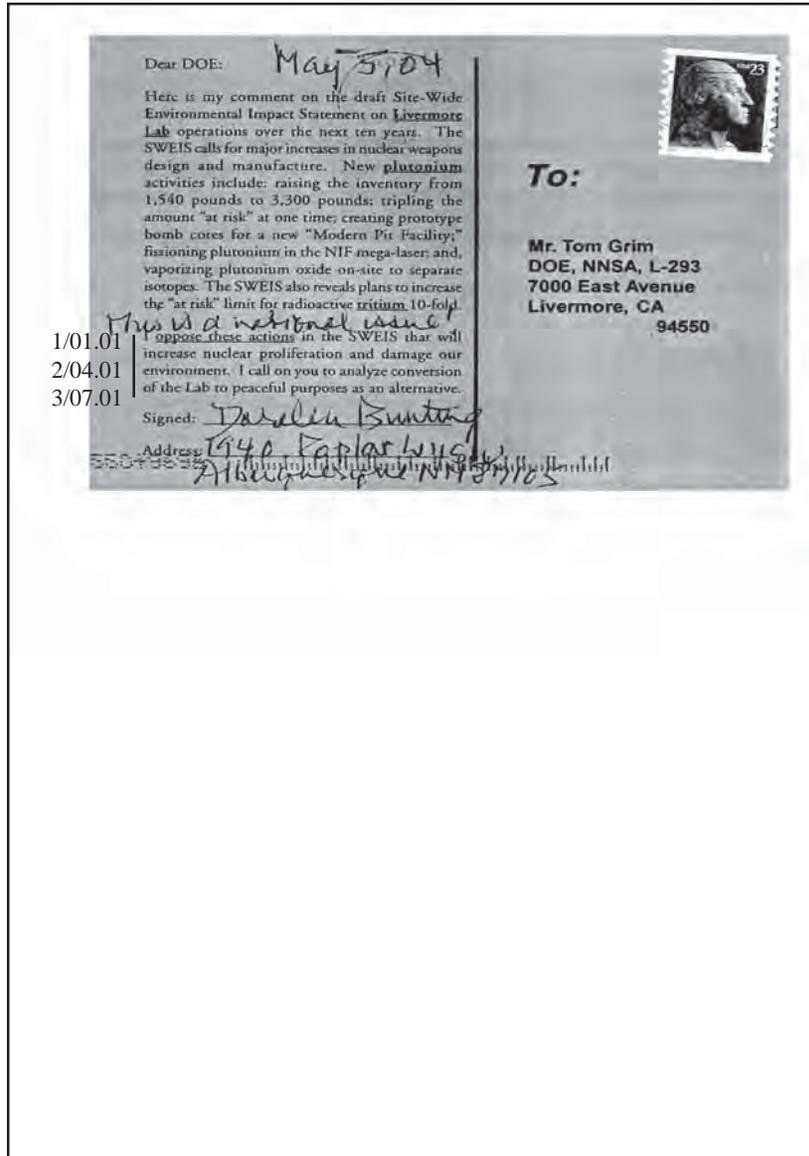
**To:**

**Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA  
94550**




Bunting, Daralen

Page 1 of 1





**Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration**



**Written Comment Form**  
Must be received on or before May 27, 2004.

1/04.01 I was present at the Public Hearing. Although you, Tom Grim, truly gave yourself in your very professional presentation, I sincerely have to object strongly to the proposed draft. I deeply believe that after 57 years of old atomic bombings of Hiroshima and Nagasaki we would have learned its destructive power to human health and lives as well as to our planet upon which we depend for our survival.

2/32.02 There can be no excuses to warrant continuing to develop new or modified or even stockpile old nuclear weapons - be it under the guise of home security or foreign deterrence. Nothing, nothing can justify what is being proposed. Moreover this undermines our agreements with other countries under the Nuclear

3/02.01

4/01.01

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

*Treaty and  
Non-Proliferation*

5/07.01

results in making our country weaker not stronger  
I stand with those who would like to see the Livermore Laboratory be converted into a laboratory for Civilian Research once the shield that presently exists is cleaned up. The monies need to be channeled into these two projects only: clean-up the present mess, and convert to research for the betterment of people.

Respectfully submitted,  
Sister Blanche E. Cadotte  
Daughters of the Holy Spirit  
503 F M Street  
Patterson, CA 95363

California Air Resources Board, Bart E. Croes, P.E., Chief  
Page 1 of 1

--  
Bart E. Croes, P.E., Chief  
Research Division  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

Cal/EPA Headquarters Building (FedEx)  
ARB Research Division, 5th floor, room 524  
1001 I Street  
Sacramento, CA 95814

E-Mail: [bcroes@arb.ca.gov](mailto:bcroes@arb.ca.gov)  
Phone: (916) 323-4519  
Fax: (916) 322-4357  
Website: <http://www.arb.ca.gov/research/research.htm>  
Customer Service Survey: <http://www.calepa.ca.gov/about/custsvc.htm>

1/32.01 The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see <http://www.arb.ca.gov/docs/energytips1.htm>.

California Energy Commission, Robert L. Therkelsen, Executive Director  
Page 1 of 4

STATE OF CALIFORNIA - THE RESOURCE AGENCY  
CALIFORNIA ENERGY COMMISSION  
1515 NINTH STREET  
SACRAMENTO, CA 95814-5912  
www.energy.ca.gov

ARNOLD SCHWARZENESSER, Governor

Thomas Grim, Document Manager  
US Department of Energy/  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CXA 94550-9234

May 25, 2004

Re: Comments on the U.S. Department of Energy's the Site-wide EIS for Continued Operation of the Lawrence Livermore National Laboratory (LLNL) and Supplemental Stockpile Stewardship and Management Programmatic EIS (DOE-EIS-0348 and DOE/EIS-0236-S3), February 2004.

Dear Mr. Grim:

The California Energy Commission coordinates an interagency working group of state agencies, called the California Nuclear Transport Working Group, which has been working cooperatively with other western states through the Western Governors' Association and with the U.S. Department of Energy (DOE) over the past decade to develop plans and emergency response procedures for large-scale DOE nuclear waste shipping campaigns. The following comments were developed in light of this extensive cooperative effort and our shared goal to ensure the safe and uneventful transport of transuranic materials and waste.

1/20.01 The Environmental Impact Statement (EIS) appears to have neglected the fundamental purpose of the EIS process which is to identify and examine potential impacts and reasonable actions that may mitigate potential future environmental impacts. Under the Proposed Action the transportation of waste, including hazardous and radioactive, is expected to increase from 88 shipments per year (2002) to 310 shipments per year and the annual number of radioactive, chemical and explosives shipments is expected to increase from 470 to 600 annual shipments. In addition, the Proposed Action will result in a significant increase in the amount of plutonium inventory at LLNL, including an increase from 20 to 60 kilograms of fuel-grade equivalent plutonium in the Plutonium Facility and an increase from the proposed goal of 200 kilograms in 1992 to 1,500 kilograms in 2004 in the Superblock.

2/33.01 Our concerns relate to the safe storage and transport of these materials and the potential risk of an accident or terrorist attack at LLNL or upon shipments to or from LLNL. There currently is no means of disposing the plutonium at LLNL. In recent years, negotiations between DOE and the State of South Carolina failed to reach an agreement for LLNL to transport the excess plutonium offsite to DOE's Savannah River Site. The EIS should adequately address the fundamental issues related to radioactive

California Energy Commission, Robert L. Therkelsen, Executive Director  
 Page 2 of 4

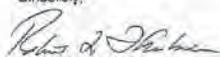
Mr. Grim  
 May 25, 2004  
 Page 2

and hazardous waste volume reduction onsite and the safe transport of radioactive materials/waste to and from LLNL. In general, the draft EIS lacks sufficient information on radioactive shipments to and from LLNL to make informed decisions about their safety.

3/20.01 The EIS should provide more complete information on the numbers and types of highway route-controlled quantity shipments to and from LLNL, including the maximum allowable quantities shipped for each type of material, packaging used, shipment modes and routes, and route-specific data including recent population and truck accident data for shipments along the proposed routes. The EIS should also provide information on the adequacy of emergency response preparation along the planned routes in California for these shipments and capabilities for responding to a major accident or terrorist attack against these shipments.

4/29.01

Our specific comments are attached (Attachment 1).

Sincerely,  
  
 Robert L. Therkelsen  
 Executive Director

California Energy Commission, Robert L. Therkelsen, Executive Director  
 Page 3 of 4

Attachment 1

**COMMENTS ON THE DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR CONTINUED OPERATION OF LAWRENCE LIVERMORE NATIONAL LABORATORY AND SUPPLEMENTAL STOCKPILE STEWARDSHIP MANAGEMENT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (DOE/EIS-0348 and DOE/EIS-0236-S3)**

**Increase in Plutonium Inventory**

5/33.01 The Proposed Action will result in a significant increase in the amount of plutonium inventory at LLNL. Page S-14 states that the primary goal of LLNL in the 1992 LLNL EIS/EIR was to reduce the plutonium inventory to 200 kilograms through offsite disposition of significant portions of the inventory. This goal was partially achieved by transporting about half of the excess material offsite. However, DOE facilities were unable to accept all materials to be shipped and in 1999 DOE examined a supplemental EIS for future program requirements at LLNL. The 1999 supplemental analysis stated a need to increase the administrative limit of 700 kilograms to support the Stockpile Stewardship Program. Now DOE's National Nuclear Security Administration (NNSA) is proposing to increase the administrative limit for fuel-grade-equivalent plutonium at the Superblock to 1,500 kilograms from the existing 700 kilograms. There is concern that DOE has no foreseeable options for reducing the amount of plutonium stored at LLNL and that the environment and surrounding population is at considerable risk from accidents or a terrorist act.

(Executive Summary, p-S-14): The Executive Summary states that DOE "continues to work on a solution for disposal of plutonium, but no "pathway for LLNL to dispose of excess plutonium currently exists..." (p. S-15). Therefore, DOE is proposing to increase the administrative limit for plutonium at LLNL. DOE's plans for the ultimate disposition of these materials should be provided in the EIS.

6/25.06, 30.01, 33.01, 29.01 The EIS states that the material is stored in robust vaults and no accident scenario is considered "reasonably foreseeable" and that terrorist acts are considered in classified documents. However, these comments provide insufficient information on the risks posed by the increase in plutonium inventory or the possible consequences from an accident or terrorist attack involving these materials. The EIS should provide a bounding analysis of these potential impacts and evaluate the adequacy of emergency response to plausible events.

7/22.01 Under the Proposed Action, the number of hazardous and radioactive waste shipments in and out of LLNL would increase to over 310 in the next decade over the current projected 88 shipments. The number of annual shipments of radioactive, chemical and explosives shipments would increase from 470 to 600 per year.

3

California Energy Commission, Robert L. Therckelsen, Executive Director  
Page 4 of 4

California Regional Water Quality Control Board, Central Valley Region, Susan Timm, Site 300 Remedial Project Manager  
Page 1 of 2

HW-25-2004 10/29 CALIFORNIA ENERGY COMMISSION FILED

**Transportation Impacts**

7/22.01 cont. (P. S-12): In order to remove TRU waste from LLNL, DOE plans to ship "more than 1,000 drums of transuranic and mixed waste to the WIPP", beginning in FY 2004. It is not clear what "more than 1000 drums" means and does not adequately bound the number of projected shipments; The EIS should provide a more precise estimate of the number of drums planned for shipment to WIPP over the next 20 years.

8/20.05 (P. 3-11): The EIS states that NNSA is proposing to develop the capability to load transuranic waste into pipe overpacks in the Superblock, beginning in FY 2005. These pipe overpacks would allow for significantly higher actinide loading into each drum for disposal at the Waste Isolation Pilot Plant (WIPP) in New Mexico and would allow up to 90 plutonium-equivalent curies per drum and up to 200 fissile-gram equivalents. The EIS further states that the pipe overpack provides a way for LLNL to dispose of waste, such as plutonium and high americium levels, and that the pipe overpack could be loading into TRUPACT-II shipping containers and shipped to WIPP.

9/22.01, 30.01 Maximizing the amount of plutonium in these shipments would increase the number of highway route-controlled quantity (HRCQ) shipments of transuranic waste from LLNL to WIPP. The EIS should provide an estimate of the number of HRCQ shipments projected from LLNL to WIPP. The EIS should also analyze the risk from an accident or terrorist attack resulting in a breach of the container involving one of these maximally loaded shipments (i.e. loaded with transuranic waste at the WIPP waste acceptance criteria) in heavily populated areas in California. It should be noted that these shipments cannot begin in FY 2005, as planned, unless emergency response preparation along the proposed HRCQ shipments routes in California has been completed.

4/29.01 cont.

TOTAL PAGES

**California Regional Water Quality Control Board**  
Central Valley Region  
Robert Schneider, Chair

Terry Tamminen  
Secretary for Environmental Protection

Arnold Schwarzenegger  
Governor

Sacramento Main Office  
Internet Address: <http://www.swrcb.ca.gov/wqcb5>  
11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114  
Phone (916) 464-3291

8 June 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

**DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR CONTINUED OPERATION OF LAWRENCE LIVERMORE NATIONAL LABORATORY AND SUPPLEMENTAL STOCK PILE STEWARDSHIP AND MANAGEMENT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

Regional Board staff thank the U.S. Department of Energy (DOE) for agreeing to accept comments on the February 2004 *Draft Site-Wide Environmental Impact Statement For Continued Operation Of Lawrence Livermore National Laboratory And Supplemental Stock Pile Stewardship And Management Programmatic Environmental Impact Statement* within the two weeks following the due date of 27 May 2004. We have the following comments with respect to operations at Lawrence Livermore National Laboratory Experimental Test Site (Site 300):

1/17.01, 17.02 1. Section 3.4.7. states that tritium emissions to the air from hydroshots at Site 300 would result in 150 curies under the Reduced Operation Alternative or 200 curies per year under the No Action Alternative. DOE does not state if, under the Proposed Action Alternative, the quantity of tritium used in hydroshots will change. At present there is a very large tritium plume in groundwater from releases from the firing table at Building 850 and from the Pit 7 Complex. Please clarify the frequency of releases, the quantity of tritium per shot, the amount of tritium estimated to remain airborne versus the amount that will potentially fallout and pollute the soil and groundwater. DOE needs to discuss mitigation measures to prevent or minimize additional soil and groundwater pollution.

2/22.03 2. The Regional Board has issued Waste Discharge Requirements to DOE and Site 300 for discharge of domestic and industrial waste. With the construction of new buildings for processing energetic materials and conducting experiments, DOE and Site 300 will need to submit, prior to beginning operations in the new facilities, a Report of Waste Discharge requesting the Regional Board to revise the existing permits or prepare new permits for industrial and domestic waste disposal.

3/22.06 3. DOE needs to explain how it will discharge waste from the new Energetic Materials Processing Center and the High Explosives Development Center. DOE is planning either to repair the Class II Surface Impoundments or close them. DOE needs to include information regarding disposition of waste, waste composition, quantity of waste, the method of transporting the waste to its discharge location, and spill prevention plans. Contingency plans for soil and groundwater cleanup in case of a spill also need to be discussed.

**California Environmental Protection Agency**  
Recycled Paper

**California Regional Water Quality Control Board, Central Valley Region, Susan Timm, Site 300 Remedial Project Manager**  
**Page 2 of 2**

Mr. Tom Grim 2 8 June 2004  
 National Nuclear Security Administration  
 U.S Department of Energy

4/28.01 DOE will need to revise its storm water pollution prevention plan to include the new locations of operations.

5/16.02 DOE proposes replacing the wetlands created by cooling tower runoff from Building 865 with wetlands at other locations. At least one of the proposed locations has tritium in the surface water. DOE needs to present an ecological risk assessment to determine if the surface water in the new wetlands will cause ecological impacts.

6/17.06 Please discuss what other potential soil and groundwater pollutants could be by-products of the outdoor firing table shots and what disposal methods will be used for the firing table debris and gravel.

If you have any questions, you may contact me at (916) 464-4657.

SUSAN TIMM  
 Site 300 Remedial Project Manager

**California Regional Water Quality Control Board, San Francisco Bay Region, Naomi Feger, Remedial Project Manager**  
**Page 1 of 2**



**California Regional Water Quality Control Board**  
**San Francisco Bay Region**

1515 Clay Street, Suite 1400, Oakland, California 94612  
 (510) 622-2300 • Fax (510) 622-2460  
<http://www.swrcb.ca.gov/rwgcb2>



Date: June 10, 2004  
 2199.9026 (NLF)

Mr. Tom Grim  
 DOE, NNSA, L-293  
 7000 East Avenue  
 Livermore, CA 94550

Via email, unsigned and by fax

**Subject: Comments on Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement, February 2004.**

Dear Mr. Grim,

Thank you for agreeing to accept comments on the Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SWEIS) within two weeks following the closure of the Public Comment period on May 27, 2004.

The SWEIS states that the major decision to be made by DOE/NNSA is to select one of the alternatives for continued operation of the Lawrence Livermore National Laboratory (LLNL). As part of the Proposed Action, DOE/NNSA is considering using additional materials including plutonium, highly-enriched uranium and lithium hydride on the National Ignition Facility (NIF) and increasing the Tritium Facility material-at-risk. We have the following comments with respect to operations at LLNL Main Site.

1/18.02

1. Section 5.3.9.2, Re Impact Analysis on the Livermore Site Surface Water: The SWEIS does not address the impact of additional radiological emissions on surface water quality. Please include a discussion in the SWEIS of these potential impacts.
2. Section 5.3.9.2, Re Impact Analysis on the Livermore Site Groundwater: There is no discussion on the potential impact on groundwater of using additional materials in the NIF. Please provide a discussion of the likelihood of a release of radioactive nuclides to the groundwater and the likelihood of the existing groundwater monitoring network to

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California Regional Water Quality Control Board, San Francisco Bay  
 Region, Naomi Feger, Remedial Project Manager  
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Mr. Tom Grim

- 2 -

1/18.02  
 cont.

detect a potential release. Compliance with underground storage tank regulations does not necessarily mean that no impacts to groundwater can be expected.  
 3. Section 5.3.1.5 et seq. states that no adverse impacts due to site operations are expected and that continued improvement of water quality and source reduction would occur. Please explain why the release potential to groundwater/surface water from increased use of radioactive and other hazardous materials is not expected to be impacted by the proposed project. For example, historic reductions in tritium usage are directly related to decreases measured in the environment. The opposite should also be true, increased operations should result in the potential for increased releases to surface water and possibly to groundwater.

If you have any questions regarding this letter, please contact me at (510) 622-2328 or by email at [nlf@rb2.swrcb.ca.gov](mailto:nlf@rb2.swrcb.ca.gov).

Sincerely,

Naomi Feger  
 Remedial Project Manager

Preserving, enhancing, and restoring the San Francisco Bay Area's waters for over 50 years



patricia Acosta  
 135 Clipper St., #10  
 San Francisco, CA 94114

May 18, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01,  
 33.01

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this,

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3/27.01, 33.01 cont. | Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01, 26.03 | 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

5/37.01 | 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

6/39.01 | 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

7/35.01 | 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it.

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**Page 3 of 3**

7/35.01 cont. | and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Patricia Acosta

Campaign Letter 2  
Page 1 of 4

May 20, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Fax: (925) 422-1776  
Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

1/31.04

Through this letter I am expressing my deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. I appreciate your focused attention to this matter. Below, I have outlined a number of specific concerns that, taken cumulatively, lead me to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. My specific concerns are:

2/08.02

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative

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2/08.02  
CONT.

limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

3/34.01  
4/33.01,  
25.01

3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

5/27.01

4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project" (ITP) and the "Advanced Materials Program" (AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

6/37.01

5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

7/26.01  
8/26.03

6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not

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<p>7/26.01 8/26.03 CONT.</p>	<p>only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.</p>
<p>9/26.04</p>	<p>7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.</p>
<p>10/39.01</p>	<p>8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
<p>11/35.01</p>	<p>9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.</p>
<p>12/14.01</p>	<p>10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.</p>
<p>13/22.01</p>	<p>11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.</p>

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<p>14/20.05</p>	<p>12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.</p>
<p>15/01.01</p>	<p>13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).</p>
<p>16/07.01</p>	<p>Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.</p>
<p>The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.</p> <p>Sincerely, Jesa Wolff 169 18<sup>th</sup> Avenue San Francisco, CA 94121</p>	

## Campaign Letter 3

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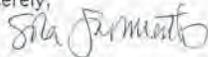
To: Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Dear DOE:

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF megalaaser; and vaporizing plutonium oxide on-site to separate isotopes. There are also plans to increase the "at risk" limit for radioactive tritium ten-fold.

1/04.01 I oppose these actions that will increase nuclear proliferation  
and damage our environment. I call on you to analyze conversion  
2/07.01 of the Lab to peaceful purposes as an alternative.

Sincerely,



Address:

710 38th Ave.  
Santa Cruz, Ca  
95062

## Candell, Marlene

Page 1 of 1

2900 Buena Vista Way  
Berkeley CA 94708  
April 13, 2004

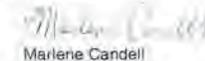
Mr. Tom Grim  
DOE, NNSA, L-293  
7000 east Avenue  
Livermore CA 94550

Dear Mr. Trim:

- 1/04.01 I have been following with concern the nuclear activities at Livermore Lab for over 20 years, but I fear the planned operations envisioned in the DOE's new draft site-wide Environmental Impact Statement are the most ill-conceived and frightening to date.
- 2/33.01 1) Doubling the amount of plutonium to 3300 pounds--when one inhaled particle can cause lung cancer and other diseases--and doing this on an earthquake-prone area of 6 million plus population--what are they thinking?
- 3/37.01 2) Planning to test technologies for producing plutonium pits with the eventual ability to produce 900 bomb cores per year--the approximate combined nuclear arsenals of China and France--what are they thinking?
- 4/39.01 3) "Enhancing" readiness to conduct underground nuclear tests and thereby encouraging other countries to regress to the era of unrestrained nuclear testing--what are they thinking?
- 5/34.01 4) Allowing manufacture of tritium targets for the NIF with the strong possibility of increasing airborne radioactivity--what are they thinking?
- 6/35.01 5) Finally, proposing genetic modification and aerosolization with live anthrax, plague, etc., thus weakening the international biological weapons treaty and threatening the public--what are they thinking?

In summary, the costs in human, environmental, and proliferation terms far outweigh any perceived benefits from these plans.

Sincerely,

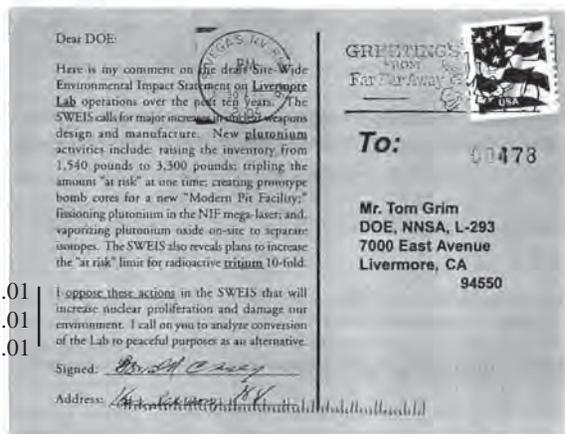


Marlene Candell

*This is a follow up to my testimony April 27*

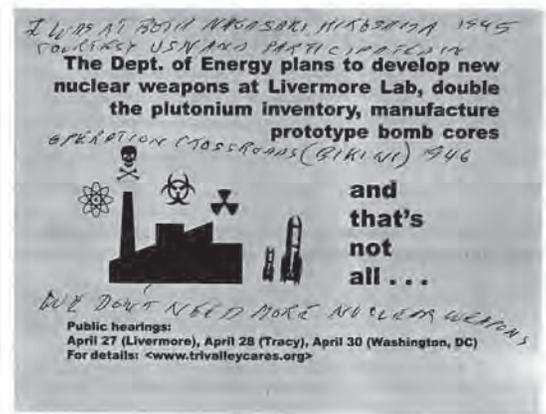
Casey, Donald  
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Casey, Donald  
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1/01.01  
2/04.01  
3/07.01

I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.



2/04.01  
cont.

Cato, Julie  
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Center for Defense Information, Victoria Samson, Research Analyst  
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4-25-04

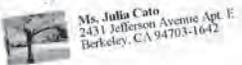
Dear Mr. Sam:

I object to the DOE's recent release of SWEIS for Lawrence Lab's planned operations for the next 10 years.

I am upset that SWEIS will <sup>likely</sup> double the amount of plutonium allowed for lab use from 1500 lbs to 3500 lbs! One microscopic particle of plutonium can cause lung cancer if inhaled. A few particles can kill more than 700 nuclear bombs!

For these, and other dangerous aspects, I ask you to oppose this misguided and dangerous SWEIS.

Sincerely,  
Julia Cato

 Ms. Julia Cato  
2431 Jefferson Avenue Apt. E  
Berkeley, CA 94703-1642

1/04.01

2/33.01

3/37.01

1/04.01 cont.

Comment on Site-Wide Environmental Impact Statement (SWEIS) for the Lawrence Livermore National Laboratory

By Victoria Samson, Research Analyst, Center for Defense Information  
vsamson@cdi.org

Given April 30, 2004, at DOE, Washington, D.C.

1/02.01 The recently-released <sup>draft</sup> Site-Wide Environmental Impact Statement (SWEIS) for Lawrence Livermore National Laboratory (LLNL) tips the Department of Energy (DOE)'s hand toward its plan to not only maintain the U.S. nuclear arsenal but to expand it.

2/39.01 The plan divulges that LLNL is likely to develop diagnostics to enhance the United States' nuclear test readiness level. This comes on the heels of repeated efforts by this administration to do the same. Last year, \$24.89 million was requested so that DOE could decrease the amount of the time needed to prepare and hold a nuclear test. Congress, after much debate, approved the amount but instructed DOE to keep the U.S. nuclear test readiness at its current level (24-36 months).

3/02.01 But in this year's budget request, the administration decided to ignore earlier Congressional restrictions. Again, funding was requested for enhanced test readiness: this time, \$30 million is to create an 18-month readiness level. This 21.4 percent increase over last year comes after repeated testimony by DOE officials to the safety and reliability of the U.S. nuclear arsenal. The only possible need for new nuclear testing would be to try out a new weapon design.

4/01.01 In fact, funding has been requested for just that. The Robust Nuclear Earth Penetrator (RNEP) is portrayed by supporters as a weapon that could be used against hardened and deeply buried targets. \$15 million was requested in FY 2004; Congress approved \$7.5 million for the project, but specified that none of the money could be used for engineering development. This year, \$27.6 million was requested for the RNEP -- an increase of 270 percent. Even more ambitious is the DOE's five-year plan, in which it estimates that \$484.7 million would be spent on the RNEP. DOE officials claim that this estimate is simply a placeholder for R&D work; but half a billion dollars pushes the RNEP well past mere research project status.

The B83, which has been worked on at LLNL, is often touted as a possible candidate for the RNEP. Lab officials frequently promote their institution as a home for the next generation of technology, pointing to their work on stockpile stewardship as the beneficiary of that relationship. However, DOE is doing more than that. It is moving toward an enhanced nuclear test readiness posture and aggressively spending on a new weapon design whose engineers are likely to push for testing. This spending will negatively affect international non-proliferation regimes. The RNEP and enhanced nuclear test readiness level show that the United States regards its nuclear arsenal as insufficient for its national security needs. If we continue to improve our nuclear arsenal, how can we realistically expect to stop other countries from following our lead?

**Central Valley Regional Water Quality Control Board, Susan Timm,  
Project Manager  
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**Citizens for Alternatives to Chemical Contamination, Kay Cumbow,  
Chairperson  
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**Grim, Tom**

**From:** Susan Timm [mailto:stimm@rb55-swrcb.ca.gov]  
**Sent:** Monday, May 24, 2004 9:43 AM  
**To:** tom.grim@oak.doe.gov  
**Cc:** nlf@2rb-swrcb.ca.gov; setian.kathy@epamail.epa.gov  
**Subject:** SWEIS for LLNL

1/31.02 I am the project manager for the Regional Water Quality Control Board, Central Valley Region, for CERCLA cleanup or operations compliance with Board permits at Site 300. I have not received a copy of the Site-Wide EIS nor the public notice. I am requesting a 30-day extension to the review period, as I have been informed that the deadline is May 27, 2004. Please let me know how I can get a copy of the SWEIS and if you will grant an extension for review so that I will have time to do so.

Susan Timm  
 Central Valley Regional Water Quality Control Board  
 11020 Sun Center Drive # 200  
 Rancho Cordova, CA 95670-6114  
 phone: (916) 464-4657  
 fax: (916) 464-4797

Dear Mr. Grim,

I am sending these comments on letterhead, (faxing), and I would like the comments to be posted officially with the letterhead. I am sending these by email just in case the fax does not work. Thank you. - Kay Cumbow, Citizens for Alternatives to Chemical Contamination.

tom.grim@oak.doe.gov  
 RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

Citizens for Alternatives to Chemical Contamination, a Statewide environmental group, is highly concerned and troubled by the health and environmental risks posed by an expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into what appears to be the indefinite future. This kind of expansion needs serious review. We have listed some of our most serious concerns below. This is certainly not all of the concerns that we have. Due to these very grave concerns, we are convinced that the Site Wide Environmental Impact Statement (SWEIS) for continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, (including the extended U.S. tax-payer community who foots the huge bill), the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

1/31.04

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgment by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgments make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2/08.02

**Citizens for Alternatives to Chemical Contamination, Kay Cumbow,  
Chairperson  
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2/08.02 cont.	<p>2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan would more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.</p>
3/34.01 4/33.01, 25.01	<p>3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.</p>
5/27.01	<p>4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be canceled as the Plutonium AVLIS was canceled in 1990 - this time permanently.</p>
6/37.01	<p>5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon</p>

**Citizens for Alternatives to Chemical Contamination, Kay Cumbow,  
Chairperson  
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6/37.01 cont.	<p>the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.</p>
7/26.01 8/26.03	<p>6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.</p>
9/26.04	<p>7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.</p>
10/39.01	<p>8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
11/35.01	<p>9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty - and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3</p>

**Citizens for Alternatives to Chemical Contamination, Kay Cumbow,  
Chairperson  
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11/35.01 cont.	facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.
12/14.01	10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.
13/22.01	11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.
14/20.05	12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.
15/01.01	13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).
16/07.01	Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade. The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.
17/03.01	Although we live in the Midwest, these are our limited tax dollars!! When tax dollars are going to go for such big changes and expansion of purposes

**Citizens for Alternatives to Chemical Contamination, Kay Cumbow,  
Chairperson  
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17/03.01 cont.	in national laboratories, it seems that there should be hearings in every state of the Union. It also is hypocritical that our United States Government should call other nations to heed disarmament, and nuclear non-proliferation and yet we ourselves do not lead the way.
	Sincerely,
	Kay Cumbow, Chairperson, Citizens for Alternatives to Chemical Contamination 8735 Maple Grove Road - Lake, MI 48632-9511 phone and fax 517-544-3318



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May 20, 2004

Mr. Thomas Grim, Document Manager  
US Department of Energy/National Nuclear Security Administration  
Livermore Site Office, I-293  
7000 East Avenue  
Livermore, CA 94550-9234

RE: Draft LLNL SW/SPEIS Comments

Dear Mr. Grim,

The City of Livermore appreciates the opportunity to comment on the Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory (LLNL) and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement.

The Draft EIS analyzes a Proposed Action and two alternatives: the No Action Alternative and a Reduced Operation Alternative. The No Action Alternative would involve the continued operation of current LLNL programs in support of currently assigned missions relating to the National Nuclear Security Administration's (NNSA) Stockpile Stewardship Program. The Proposed Action would include operations under the No Action Alternative plus new and/or expanded LLNL operations in support of reasonably foreseeable future mission requirements. The Reduced Operation Alternative includes an overall reduction of LLNL activities below the No Action Alternative level.

The City of Livermore offers the following comments on the Draft EIS.

**Alternatives**

As indicated, the Draft EIS analyzes two alternatives to the Proposed Action: a No Action Alternative and a Reduction Operation Alternative. The EIS Summary discussions relating to the two alternatives indicate that the alternatives would be unable to meet, or only partially meet, objectives of the Stockpile Stewardship Program. Are there alternatives to the Proposed Action that would allow LLNL to meet its basic mission objectives while reducing, or at least, not increasing, potential environmental impacts over the No Action Alternative? Such alternatives should be considered in the EIS.

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The City requests that the following corrections and updated information be included in the EIS relating to surrounding land uses, Livermore planning programs, aesthetic resources, traffic and transportation.

**Surrounding Land Uses**

Figure 4.2.1.1-1. – *Livermore Site Surrounding Land Uses*. Text pages 4.2-3

- 2/09.01
  - The area north of I-580, east of Vasco Road and west of Laughlin Road is primarily Residential, not Rural Residential.
  - The area east of Vasco Road and south of East Avenue is Subarea 1 of the City's South Livermore Valley Specific Plan. Single-family residential development by Meritage Homes and Pacific Union Homes (133 units total) is currently underway in this area.
  - Subarea 2 of the South Livermore Valley Specific Plan is located south of East Avenue and west of Vasco Road. While a vineyard buffer area is located directly south of East Avenue, a significant portion of this area is under development with single-family residences by Signature Homes and Greenbriar Homes (550 units total) and is approximately 65% complete.

Figure 4.2.2.1-1. *Livermore Site Surrounding Land Use Designations*.

- 3/09.02
  - The City recently completed a comprehensive update of the General Plan with the adoption of the 2003 General Plan in February 2004. Land use designations for several properties in the vicinity of LLNL, have changed as a result of the updated General Plan.
  - The land use designation for 38 acres located east of Vasco Road and north and south of Brisa Street was changed from High Intensity Industrial (HII) to Urban High-3 Residential (14-18 units per acre). This site is located adjacent to the Vasco ACE station.
  - The Service Commercial area located north of I-580 and east of Herman Avenue is property owned by BART and is planned for future transit oriented development. The area has been redesignated as Urban High-2 Residential (8-14 du/ac), Urban High-3 Residential (14-18 du/ac) and BART.

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3/09.02  
cont.

- The area east of Greenville just south of I-580 is now designated as Large Parcel Agriculture (LPA).
- Lawrence Livermore National Laboratory and Sandia National Laboratories are now designated as Community Facilities-Research and Development (CF-R&D).

City of Livermore Planning Programs, Page 4.2-9

4/09.03

- As previously indicated, the City recently completed a comprehensive update of its General Plan. The discussions relating to the City's General Plan on pages 4.2-9 and 4.2-10 need to be updated to reflect current policies and programs.
- The North Livermore Area "A" General Plan Amendment adopted by the City in March 1988 (page 4.2-10) has been incorporated into the updated General Plan and is no longer a separate planning document.
- The update of the Livermore Municipal Airport Master Plan is currently underway. The City Council recently formed an advisory committee to review the proposed draft Master Plan and provide recommendations to the City Council. Completion of the update process, including public review of the draft Master Plan and environmental documents, is tentatively scheduled for the end of 2004.

**Aesthetic and Scenic Resources**

5/12.01

Page 4.6-4. Policies of the Scenic Route Element of the 1976 General Plan have been incorporated in their entirety into the Community Character Element of the 2003 General Plan. Other visual resource policies of the 1976 General Plan, including amenities designated for preservation as indicated in Table 4.6.1-2, have also been carried forward in the 2003 General Plan.

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**Traffic and Transportation**

Page 4.13-6 *Road Improvements Near the Livermore Site*

The Circulation Element of the recently adopted 2003 General Plan identifies several proposed transportation improvements in the vicinity of LLNL. In addition to the Vasco Interchange, improvements are proposed for the Greenville Interchange. Roadway improvements along Vasco Road include widening from four to six lanes between Patterson Pass Road and Las Positas Road and from four to eight lanes between Las Positas Road and I-580. Along Greenville Road, in addition to improvements near the Union Pacific Railroad, roadway improvements include widening from two to four lanes between Patterson Pass Road and National Drive and from four to six lanes between National Drive and Northfront Road.

The City requests further analysis, clarification and additional information regarding traffic impacts and air quality impacts as discussed below.

**Traffic Impacts**

6/20.03

The draft EIS has not adequately addressed the traffic impacts of the Proposed Action or the alternatives. The draft EIS reports the expected increase in traffic generated by the Proposed Action (1,100 daily trip increase over the No Action Alternative), but does not distribute the project trips to the roadway network to determine if it causes significant impacts. There are roadways and intersections providing primary access to the Livermore site that have poor levels of service under existing conditions. Specifically, I-580 near Vasco Road, and Vasco Road near I-580 have existing and forecast future congested traffic conditions. The City requests that the EIS report the following traffic impacts:

- What are the existing and future levels of service on I-580 between First Street and Grant Line Road both with and without the Proposed Action?
- What are the existing and future intersection levels of service along Vasco Road and Greenville Road between I-580 and East Avenue both with and without the Proposed Action?
- What are the impacts of the Proposed Action to I-580, Vasco Road, Greenville Road and the signalized intersections
- What traffic improvements are proposed to mitigate the congested conditions resulting from the Proposed Action?
- What affect does non-auto transportation (e.g. bus, bike, pedestrian, ACE)

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6/20.03  
cont.

have on reducing auto traffic impacts?

- \* What is the Proposed Action's fair share mitigation costs relating to transportation impacts and what funding is available? The City has calculated an estimated a fair share contribution towards transportation improvements based on information provided in the draft EIS. With an estimated 6.6% of future traffic growth on Vasco Road attributed to the Proposed Actions, a preliminary fair share contribution for improvements to Vasco Road and the Vasco Interchange is estimated at \$3.1 million. (See Attachment for calculation of fair share contribution.)

**Air Quality Issues, Concerns and Questions**

The premise of this portion of the review of the Environmental Impact Statement (EIS) is that new or increased levels of activities need not introduce an increased level of hazard to the environment. Expertise and proficiency should accompany both new and increased levels of activity that should lead to lower risk and reduce environmental impact. The following discussion follows the EIS sections that cover the primary topics in air quality issues.

Summary Section 5.5.1.10, page 5-12, on Modifications, Upgrades and Decontamination and Decommissioning indicates that over 0.25 million square feet of floor area would undergo decontamination and decommissioning, including facility demolition. In Volume I of the EIS, page 3-22, Table 3.6-1, the only significant non-radiological airborne pollutant described is carbon monoxide. In Section 4.7.5, page 4.7-7, it is indicated that vertical mixing to dilute pollution is not conducive with the topology of the Livermore Valley. In general, the valley is a non-attainment area for compliance with particulate pollution. The number of exceedences has increased each year as seen in Figure 4.10.2-2, page 4.10-11.

- \* So as not to worsen the problem and meet the BAAQMD "no net increase" provision (Section 4.10.2.1, page 4.10-2), what effects on the outside air quality will occur by the generation of debris particulates (e.g. PM<sub>2.5</sub> and PM<sub>10</sub> listed in Table 4.10.1-1) during the demolition processes?
- + How long will the adverse effects last?
- \* Standard practices are indicated in Section 5.2.8.1, page 5.2-33 (and Appendix B Waste Management), for decommissioning, decontamination and demolition work. Will these activities be

7/17.03

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7/17.03  
cont.

conducted as guided by the "as low as reasonably achievable" (ALARA) principle (Section 4.10.4.5, page 4.10-20)?

- \* To gauge the appropriate level of regulation consistent with particulate generation (Section 5.1.8.1, page 5.1-6), will there be on-site monitoring of particulate pollution?
- \* Which respiratory effects are magnified in the general population from an increase in airborne particulates generated by these activities?
- \* How do these activities differ from the airborne particulates generated by other outside activities in Livermore, e.g. on-going housing developments?

A significant increase in the level of tritium emissions is indicated in Section 5.2.8.2, page 5.2-37.

- \* Is the proposed increased level of tritium activities leading to an "unavoidable" increase in airborne emission levels of tritium? (See Table and Figure 4.10.5-1, page 4.10-24)
- \* A high-efficiency particulate air (HEPA) filtration efficiency of 99.97% is given in Appendix N.5.2.3. Can this be improved and why can't the proposed overall increased level of radiocluid activity (solids and gases) be met with constant or reduced airborne waste-emission levels?
- \* What *airborne* sources of background radiation exist which yield a dose level 200,000 times greater (as indicated in Section 4.10.5.2 Radiation Doses to the Public, page 4.10-26) than the emissions from LLNL?
- \* The statistics for comparing radiation dose from LLNL operations versus background sources as listed in Table 4.16.2.1-1, page 4.16-12, do not appear logical. What population base should be used to compare the columns of millirem to person-rem? For example, does the atmospheric MIEI dose of 0.12 millirem compare to 0.085 millirem, i.e. a 1.7 person-rem population dose for a population of 20,000?
- \* Table 4.16.2.2-1, page 4.16-13 indicates a continuing increase in worker dose from a level of 6.9 person-rem in 1998 to a level of 28.0 person-rem in 2002. How does this coincide with a decreased risk versus the general population? Why is the level increasing? Can the level be expected to increase further with the proposed activity levels?
- \* What activities or efforts will be implemented over the next 10 years to control and minimize the release of toxic materials? What type of monitoring is in place or will be in place relating to potential releases of toxic materials?

8/17.02

City of Livermore, Dr. Marshall Kamena, Mayor  
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City of Livermore, Dr. Marshall Kamena, Mayor  
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9/26.03

Summary Section S.6.5, page S-24, on Radiological Air Quality indicates that there are differences among the no action alternative, proposed action, and reduced operation alternative. The maximally exposed individual located east of the National Ignition Facility would receive a 30% increase in radiation dose in the proposed action versus the no action alternative. Appendix M.3.1.4 states neutrons from fusion experiments would penetrate the roof of the facility and cause sky shine radiation where neutrons scatter back down to the ground. Other neutrons would interact with structural materials and emit gamma rays that would reach the ground.

- Are better building materials available for use in the roof or structure that would trap the neutrons before escaping into the atmosphere and ground?

Plutonium Administrative Limits and Disposal

10/33.01

The proposed project includes an increase in the plutonium administrative limits from the current 700 kilograms (approximately 1,540 pounds) to 1,500 kilograms (approximately 3,300 pounds) since no pathway for LLNL to dispose of excess plutonium currently exists. The Savannah River facility in South Carolina will not be completed until 2015.

- What is the timing for identifying and implementing appropriate disposal for the excess plutonium?
- Will it be possible for plutonium to be stored at the Savannah River facility before 2015?
- Will the plutonium administrative levels be reduced back to current levels when appropriate disposal has been identified and implemented?

If there are any questions regarding the above, please contact Susan Frost, Principal Planner, at (925) 960-4462.

Sincerely,

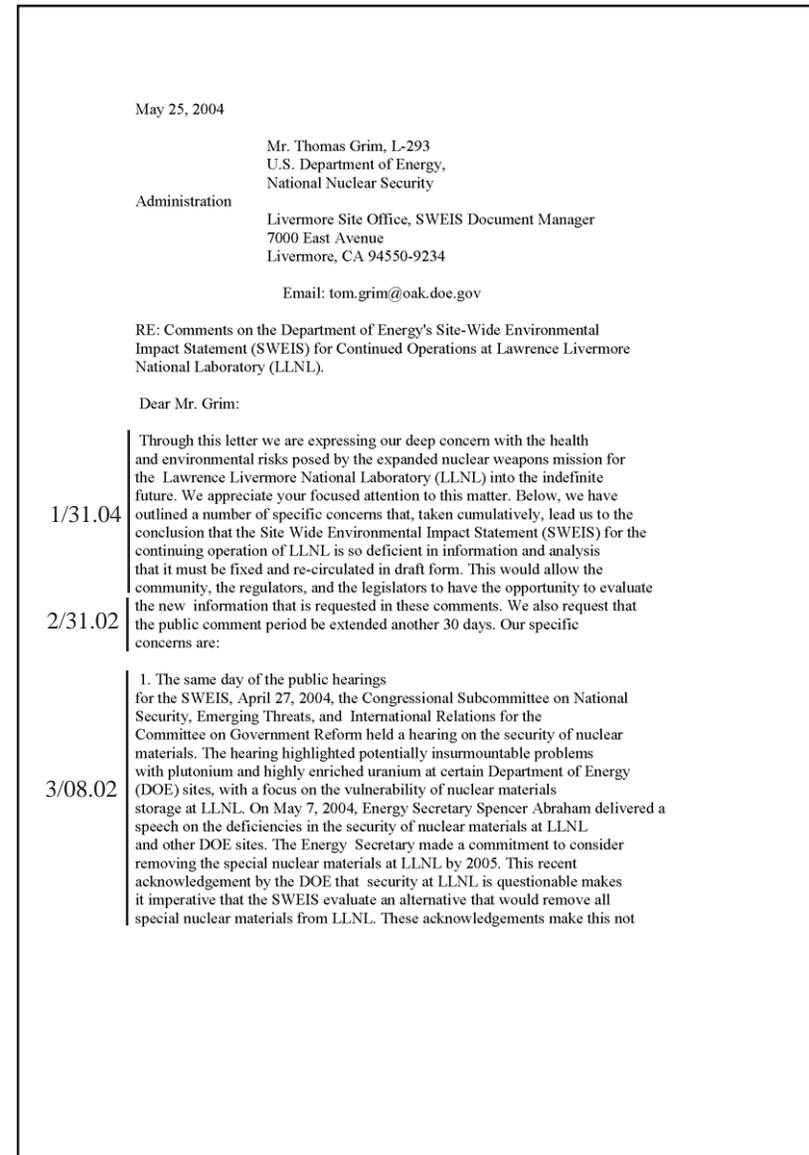
Dr. Marshall Kamena  
Mayor

City Livermore - Draft LLNL SW/SPEIS Comments  
May 20, 2004  
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cc: City Council members  
Linda Barton, City Manager  
Marc Roberts, Community Development Director  
Tri-Valley CARES

City of Santa Cruz, Scott Kennedy,  
 Mayor  
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Coalition for a Safe Lab, Mary Wulff  
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Coalition for a Safe Lab, Mary Wulff

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3/08.02 cont.	<p>only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.</p> <p>2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.</p>
4/34.01 5/33.01, 25.01	<p>3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.</p>
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7/37.01	<p>5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per</p>

Coalition for a Safe Lab, Mary Wulff

Page 3 of 4

7/37.01 cont.	<p>year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.</p>
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**Coalition for a Safe Lab, Mary Wulff**  
**Page 4 of 4**

**Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair**  
**Page 1 of 10**

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Sincerely,  
 Mary Wulff  
 Coalition For a Safe Lab  
 PO BOX 1803  
 Hamilton MT 59840

**Committee to Minimize Toxic Waste**

May 25, 2004

**URGENT**

Mr. Thomas Grim, L-293  
 U.S. Department of Energy,  
 National Nuclear Security Administration  
 Livermore Site Office, SWEIS Document Manager  
 7000 East Avenue  
 Livermore, CA 94550-9234

Fax: (925) 422-1776  
 Email: tom.grim@oak.doe.gov

**RE: Comments on the Department of Energy's Site-Wide Environmental Impact  
 Statement for Continued Operations at Lawrence Livermore National Laboratory.**

Dear Mr. Grim:

1/31.04 | Through this letter we are expressing our deep concern with the health and environmental  
 risks posed by the expanded nuclear weapons mission for the Lawrence Livermore  
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 taken cumulatively, lead us to the conclusion that the SWEIS is so deficient in  
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**Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair**  
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**Committee to Minimize Toxic Waste**

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Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair  
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2/08.02 cont.	<p>pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.</p>
3/34.01 4/33.01, 25.01	<p>3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.</p>
5/27.01	<p>4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium — Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project" (ITP) and the "Advanced Materials Program" (AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 — this time permanently.</p>
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Sincerely,  
  
 Pamela Sihyola, Co-Chair/GMTW  
 P.O. Box 9646  
 Berkeley, CA 94709  
 ccr  
 Senator Dianne Feinstein  
 Room 331, Senate Hart Office Bldg.  
 Washington, DC 20510  
 Or email to: michela\_senders@feinstein.senate.gov

Senator Barbara Boxer  
 Room 112, Senate Hart Office Bldg.  
 Washington, DC 20510  
 Or email to: jennifer\_tang@boxer.senate.gov

01228

**U.S. wants to remove plutonium from lab**  
 Security concerns at Livermore cited

By Zachary Cole  
 CHRONICLE WASHINGTON BUREAU

WASHINGTON — Energy Secretary Spencer Abraham said Friday he wanted to remove weapons-grade nuclear material from the Lawrence Livermore National Laboratory because of concerns over the lab's ability to protect radioactive material from terrorists and its location in the densely populated Bay Area.

University of California officials, who manage the weapons lab for the Energy Department, insisted the proposal was only being studied by the agency and that even if it was approved, the removal of the weapons material might be a decade or more away. But Abraham made clear that he saw the storage of plutonium and enriched uranium at Lawrence Livermore as a serious safety issue.

"While the requirements of stockpile stewardship mean that we must retain nuclear materials at Lawrence Livermore National Laboratory today, over the long

► LIVERMORE: Page A8

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 SATURDAY, MAY 8, 2004  
 NORTHERN CALIFORNIA'S LARGEST NEWSPAPER  
**San Francisco Chronicle**

Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair
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LIVERMORE LAB UNDER SCRUTINY

Lab could lose nuclear materials

► LIVERMORE From Page 8

term we should look for a better solution," Abraham said during a speech in South Carolina. The announcement could have far-reaching consequences for the lab, which is the nation's largest weapons research facilities along with its sister lab, Los Alamos National Laboratory in New Mexico. Livermore officials had recently proposed doubling the amount of plutonium stored at the lab in its 150,000-sq-ft plutonium vault to 1,500 kilograms to allow the scientists to research new ways of forming plutonium "pits," the baseball-size chunks of fissionable material that are the key component of a nuclear bomb. Abraham's opposition expressed in his speech, which is already opposed by some local residents and anti-nuclear groups.

The secretary's position could ultimately lead to a major shift in the mission of the lab, which was established in 1952 by physicist Robert Serber. The lab's mission was to develop nuclear weapons. Any significant change at the lab would ripple through the nation's economic recovery, which is heavily dependent on a facility that has about 6,700 employees and a \$1.5 billion annual budget. Abraham's speech came after a scathing report last week by the General Accounting Office, the investigative arm of Congress, which questioned Lawrence Livermore's ability to protect its plutonium.

plutonium and other nuclear materials from a terrorist attack. A separate report by the Defense Nuclear Facilities Safety Board — a congressionally mandated advisory group in the Department of Energy — says that the lab's safety plan for Building 332, the plutonium building, is flawed. Some local residents and government watchdog groups have said Livermore should not be permitted to maintain stores of weapons-grade nuclear material because of the risk of terrorism by the Interstate 580 and the town of Livermore — as well as the rest of the Bay Area. The Project on Government Oversight — a Washington, D.C., group that monitors nuclear safety — praised Abraham's statement.

Who backs Lawrence Livermore is in an impossible situation, given that it's in the middle of a residential community," said Danielle Brian, the group's executive director. "It cannot adequately use all the techniques necessary to protect the plutonium vault, which is highly enriched uranium. When it was built, it didn't have such a dense population around it. There has been an original visitor for the lab."

But lab supporters said Serber's vision of the lab's mission could undermine the central mission of the lab and its scientists — assuring the reliability of the nation's nuclear weapons. Rep. Ellen Tauscher, D-Walnut Creek, whose district includes the

lab, said Abraham was right to limit the number of sites that store plutonium elements, but she warned against removing material critical to the lab's research.

"Currently, there is excess nuclear material at Lawrence Livermore that could be removed if another location is found to store it," Tauscher said. "But some special nuclear material must remain at the laboratory if it is to perform its essential national security mission." Abraham's concern could be addressed by the Energy Department and its other Energy Department labs. Congress passed a bill last year requiring the university and Lawrence Livermore and Lawrence Berkeley National Laboratory to submit a plan to Congress by the end of the year. The plan would have to include a review of the nation's nuclear weapons complex that will include his plan to consolidate nuclear materials into fewer sites with better protection.

"As part of that review, we will work to get the plutonium vault work reauthorized to allow us to remove the category 1 and 2 special nuclear materials stored there," he said. But there is internal debate at the Energy Department about how to proceed. Lawrence Livermore's head, Linton Brooks, head of the National Nuclear Security Administration, told a congressional panel last month that he opposed moving plutonium away from Livermore. "I don't see the need for the lab's security stewardship work," Brooks said.

Abraham's speech drew fire from some Democrats, who said the agency had been slow to fix security problems at the labs. Rep. Edward Markey, D-Mass., a longtime critic of the plutonium lab, said

he was skeptical Abraham would follow through on his words. "Instead of deciding to move plutonium out of Lawrence Livermore National Laboratory," Markey said, "the secretary has only announced that he will think about doing it."

The issue also became part of the presidential race as Democratic candidate Sen. John Kerry criticized Abraham's comments and accused the Bush administration of failing to protect the labs. Kerry's campaign called for an investigation into the lab's security. It was led by the Congressional Accounting Office that interviewed Livermore, they could assemble a "dirty bomb" within minutes.

"Security personnel do not have high-powered weapons, and they are not trained in the use of copiers to defend the site," Kerry said in a prepared statement.

But Livermore officials deny the lab is vulnerable, saying there is a multilayered defense system including a well-manned security force. "The Energy Department has a security force of 1,000 people," said Linton Brooks, head of the National Nuclear Security Administration, told a congressional panel last month that he opposed moving plutonium away from Livermore. "I don't see the need for the lab's security stewardship work," Brooks said.

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SATURDAY, MAY 8, 2004

LIVERMORE LAB UNDER SCRUTINY

Nuke watchdog at odds with Energy Dept. on lab's future

By Key Davidson CHRONICLE STAFF WRITER



Abraham Brooks

The fate of Lawrence Livermore National Laboratory is turning into a confrontation of two Washington titans — the U.S. secretary of energy and the head of the secretive agency that oversees the nation's nuclear weapons complex.

Some lab-watchers are confident Livermore can remain a busy hive of nonmilitary scientific research whether it remains a nuclear weapons lab or not, they said Friday after Energy Secretary Spencer Abraham announced that he would investigate the possibility of moving all of Livermore's plutonium to a more secure site, far away from the suburbs that increasingly encroach on it.

Yet within Livermore lab, pressure for continued nuclear weapons work remains strong. That pressure could force a confrontation between Abraham and Linton Brooks, czar of the National Nuclear Security Administration, which oversees the huge U.S. nuclear weapons complex from Livermore to Savannah River, S.C. Brooks' testimony to Congress last week and lab officials' comments Thursday made clear their belief that they can continue to safely operate the lab's plutonium facility in Livermore without endangering workers or residents.

But Abraham's speech Friday implicitly expressed a lack of confidence in those assurances. Danielle Brian, executive director of the Project on Government Oversight in Washington, said the Bush administration was split over what to do about the nuclear weapons complex. "There is a divide between the secretary's intentions and what the nuclear security agency wants to happen. The agency is really in bed with the labs, and it's trying to protect the labs at whatever cost."

"Abraham wants to drag the complex kicking and screaming

into the post-9/11 world — (onto) nuclear security agency) is digging in its heels and trying to protect the lab's interest over the nation's interest at all costs."

In his testimony April 27 to the House Government Reform subcommittee, Brooks said plutonium should stay at Livermore so scientists there can assess the reliability of the nation's nuclear arsenal. Alluding to proposals to consolidate all U.S. weapons-grade plutonium at a single site, Brooks countered. "Consolidation is not a panacea."

The big question raised by Abraham's announcement Friday is: If Livermore loses its plutonium cache, what is the lab's future? "I don't want to go there," said Livermore spokesperson David Schwezler in his brief remarks. "It's too early to speculate on plutonium being moved out of here. . . . We look forward to working with (the Energy Department and the nuclear security agency) on the studies that are mentioned" by Abraham in his speech.

Lab officials have long touted the nonmilitary applications of Livermore technology built mainly for military reasons, such as their huge super-laser — the National Ignition Facility, still under construction — which could be used to simulate astrophysical phenomena such as exploding stars.

Should its half-century-long plutonium era end, "there's plenty (of nonmilitary work) for Livermore to do — all kinds of environmental and energy work and biomedical work," says a frequent

critic, Christopher Paine, of the Natural Resources Defense Council in Washington.

Anti-nuclear groups do not typically praise actions by the Bush administration, but some were quick to commend Abraham's speech. The speech is "factually quite significant and all to the good," said Paul Leventhal, founding president of the Nuclear Control Institute in Washington.

Surrounded by highways, suburbs and airfields, "all they've got (for protection at Livermore) is a fence," Leventhal charged. "They're counting on their guard force to defeat an adversary. But if you had an adversary comparable to 9/11, a suicidal adversary coming in large numbers from several directions, (Livermore guards) would be extremely hard pressed to fend them off."

If the plutonium leaves Livermore, where should it go? Abraham's speech didn't explore this unavoidable topic, but in interviews Friday, outside analysts suggested possible destinations.

► The Device Assembly Facility, a highly secure bunker at the southern Nevada nuclear test site, where the United States exploded nuclear bombs for four decades.

► Pantex Plant in rural Texas, whose Web site identifies it as "America's only nuclear weapons assembly and disassembly facility." Some 12,000 plutonium "pits" — roughly 30 to 40 tons' worth of spherical cores from disarmed nuclear weapons — now rest in igloo-style bunkers at Pantex, 17 miles from Amarillo.

► Los Alamos National Laboratory in New Mexico, the nation's first atomic weapons facility, where the first A-bomb was developed in 1945. One advantage of Los Alamos is that its staff has extensive experience in working with plutonium. In fact, Los Alamos currently stores considerably more plutonium than Livermore does.

E-mail the author at kdavidson@stchronicle.com

San Francisco Chronicle

SATURDAY, MAY 8, 2004

A15-777-1111

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Committee to Minimize Toxic Waste

Addendum to Comments on the Department of Energy's (DOE) Site-Wide Environmental Impact Statement (EIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL)

" U.S. WANTS TO REMOVE PLUTONIUM FROM LAB. SECURITY CONCERNS AT LIVERMORE CITED", was the front page headline in the San Francisco Chronicle on Saturday, May 8, 2004. (Attachment 1)

17/08.02 We applaud Energy Secretary Spencer Abraham's proposal to remove weapons-grade nuclear material, i.e. plutonium and enriched uranium, from LLNL due to concerns over the lab's ability to protect radioactive materials from terrorists and its location in the densely populated San Francisco Bay Area.

16/07.01 cont. We urge the DOE to replace weapons projects with peaceful, civilian scientific capabilities and missions at the Livermore lab by proposing new, unclassified programs in environmental clean-up, non-polluting and renewable energy, earth sciences, astro physics, atmospheric physics and others. We hope that Secretary Abraham's proposal will finally lead to a major shift in LLNL's mission.

Congress passed a bill last year requiring the University of California's (UC) contracts to run Livermore and the Lawrence Berkeley National Laboratory (LBNL) to be put out to competitive bidding. Secretary Abraham had announced a year earlier that the UC would have to bid to manage Los Alamos, which it has run for more than 60 years.

LBNL originated on the University of California Berkeley (UCB) campus as the UC Radiation Laboratory in 1932. In the late 1930's the regents gave Ernest O. Lawrence permission to build in the Strawberry Canyon, above and east of the Central Campus. In 1940 the "Rad Lab" was relocated to its present site. Dr. Lawrence wrote that the new site "gave privacy and sufficient distance to alleviate the possible ill effects of errant radiation upon the town below." However, this was not to be. After 1948 the facility was funded by the U.S. Atomic Energy Commission (AEC) and its successor agencies. In 1972 the name was changed to Lawrence Berkeley Laboratory, which by this time had become a major nuclear industrial complex surrounded by residential neighborhoods.

In recent years LBNL has been plagued by financial and environmental scandals and science fraud. In newspapers we see articles with headlines such as:

"Berkeley Lab Found Research Fabricated" (San Francisco Chronicle 7/13/2002)

"LBNL Finds Accounting to be Sloppy" (Berkeley Voice 10/3/2003)

"Berkeley Lab Poses Health Risk, Fire Could Release Dangerous Radioactivity" (San Francisco Chronicle 2/6/ 2001)

18/32.03 There is a lot of mistrust in the community regarding LBNL's willingness and ability to manage and control toxic, radioactive and hazardous pollution from the many sources at the lab. The evidence is in the dozen contaminated groundwater plumes in the ecologically sensitive Strawberry Creek Watershed, in the radioactive vegetation, tritium contaminated eucalyptus grove offsite next to the Lawrence Hall of Science, a children's museum and school, etc,

17/08.02 cont. In view of Secretary Abraham's proposal to remove plutonium/ weapons work from Livermore, it would seem logical and financially prudent, since both LBNL and LLNL are taxpayer funded, for DOE to consolidate resources and transfer all the redundant scientific missions/activities and divisions from LBNL to Livermore. This would help LLNL to remain DOE's major civilian scientific laboratory in California, and would free over 200 acres of land, now occupied by LBNL to divert back to UCB, since the University, as described in the UCB 2020 Long Range Development Plan (LRDP) is in dire need for land and space.

The UCB 2020 LRDL mandates the University to accept 4000 new students by year 2010, as the Central Campus and the contiguous neighborhoods are already cracking at their seams. UCB is a small urban campus, already overcrowded having created enormous traffic management and safety, fire safety, utility and sewer management, environmental and ecological degradation etc. problems for the City and citizens of Berkeley.

19/32.03 We propose DOE's divestment from LBNL and ask that a masterplan and a timeline be provided for the transfer of activities from LBNL to LLNL. We also ask that a timeline and budget be included for the site clean-up, that would allow UCB to include sections of the site in the 2020 LRDP planning, for instance to be used for the proposed faculty and student housing, just a walking distance from the main campus.

The ultimate goal is that the LBNL site be converted into an integral part of the core campus, without barbed wire fences, security guards and constants threats of terrorist attacks. It should become a place where the University could continue its mission as an institute of higher learning.

Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair  
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20/36.01

Specific comment and questions re: LLNL SW/SPEIS - Summary p.S-19 titled: BERKELEY WASTE DRUMS

1. What is the exact content of the 14 drums (3000 liters) of transuranic and mixed transuranic waste?
2. Where are these drums currently stored at LBNL?
3. What radioactive isotopes do the drums contain?
4. What is the radioactivity of each drum?
5. What are the hazardous constituents of the transuranic mixed waste?
6. What is the proposed location for the solidification of the liquid waste?
7. What is the proposed location for the neutralization of the corrosive mixed transuranic waste?
8. What permits will LBNL need to perform the above mentioned waste treatment?
9. Is this kind of waste treatment allowed under LBNL's HWHF's Part B. Permit?
10. Where did this waste originate at LBNL?
11. What are laws that govern the packaging and shipment of this waste?

We categorically object to any treatment, repackaging, opening etc. of any of these waste drums onsite at LBNL.

We request that the strictest laws be observed with respect to shipping protocols mandated by DOE and DOT, without any exemptions.

Dear Mr Grim:

I would like to add the following comments to the ones below that I am submitting at the request of TriValley cares in Livermore - they are doing the most important and valuable work, and I thank them!

1/01.01

the proposed expansion at Livermore is frightening and truly hard to believe at this juncture in history - it is time for this nation to take responsibility for stopping the proliferation of weapons of all kinds, and especially WMD, and for beginning a true path of disarmament this proposal puts us in a position of great hypocrisy in the world community and stands in direct contradiction to the creative intention of the universe and the commitments we need to be making now to come into alignment with that intention - that intention moves toward love and gentleness and reverence for all of life and for this planet itself, not toward destruction or the means to destroy and injure

I thank for your careful consideration and review of a proposal that should be abandoned sincerely

sherry conable

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

2/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

3/08.02

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

4/27.01, 33.01

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out

Committee to Minimize Toxic Waste, Pamela Sihyola, Co-Chair  
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Conable, Sherry  
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20/36.01

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Here are my comments on six dangerous new programs being proposed at Livermore Lab.

3/08.02

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

4/27.01,  
33.01

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out

Conable, Sherry  
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4/27.01, 33.01 cont.	plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.
5/26.01, 26.03	3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.
6/37.01	4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.
7/39.01	5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.
8/35.01	6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

Conable, Sherry  
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9/04.01	I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.
10/07.01	Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.
	Sincerely,
	Name: Sherry Conable
	Address: 2120 N. Pacific Avenue #76, Santa Cruz
	State: California 95060

**Concerned Citizens for Nuclear Safety, Amy Williams, Media Network  
Coordinator  
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May 27, 2004

By fax to: (925) 422-1776

Thomas Grim, L-293  
U.S. Department of Energy  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Re: Comments on the draft Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL) prepared by the Department of Energy (DOE).

Dear Mr. Grim:

Concerned Citizens for Nuclear Safety (CCNS) is a Santa Fe-based non-profit organization founded in 1988 in order to provide a voice for citizens' concerns about nuclear waste transportation through Santa Fe from Los Alamos National Laboratory (LANL) to the Waste Isolation Pilot Plant (WIPP), near Carlsbad, NM. CCNS recognizes that, because of their unique relationship as sister laboratories operated by the University of California, operations at LLNL may seriously effect operations at LANL.

1/31.04 Through this letter, CCNS expresses our deep concern about the health and environmental risks posed by the expanded nuclear weapons mission of LLNL in the indefinite future. We appreciate your focused attention to this matter. Below we have outlined a number of specific concerns that, when taken cumulatively, lead us to the conclusion that the SWEIS is technically indefensible and must be resubmitted for public comment. This would allow the community, regulators and legislators the opportunity to evaluate the new information that is requested in these comments. These specific concerns include:

2/08.02 1. On April 27, 2004, the day of the public hearing to discuss the SWEIS, there was also a meeting of the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform. The subcommittee discussed the security of nuclear materials and highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain DOE sites, with a focus on the vulnerability of storage of special nuclear materials at LLNL.

On May 7, 2004, Secretary Spencer Abraham outlined the deficiencies in the security of nuclear materials at LLNL and other DOE sites, including

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www.nuclearactive.org

**Concerned Citizens for Nuclear Safety, Amy Williams, Media Network  
Coordinator  
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2/08.02 cont. LANL. Secretary Abraham made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgment of deficiencies in security at LLNL make it imperative that the SWEIS include an alternative in which all special nuclear materials have been removed from the LLNL site. Secretary Abraham's commitment makes this SWEIS as it is a foreseeable outcome within the next decade at LLNL.

3/33.01 25.01 2. Rather than reduce the amount of special nuclear materials onsite at LLNL, the draft SWEIS proposes to more than double the limit for plutonium storage at LLNL from 1,540 pounds to 3,300 pounds. Moreover, under the proposed action, the administrative limit for highly enriched uranium to be stored in Building 239 would double, from 55 pounds to 110 pounds.

2/08.02 cont. Seven million people live in areas surrounding LLNL and residences line the fence of LLNL's property. Plutonium is difficult to store safely because it can spontaneously ignite and burn under certain circumstances. Further, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed to be stored at LLNL are enough to make more than 300 nuclear weapons.

4/34.01 5/33.01 25.01 3. CCNS believes that it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. Nevertheless, the draft SWEIS proposes to increase the "in process" limit at which tritium is considered a risk at LLNL ten-fold, from just over 3 grams to 30 grams. The draft SWEIS also proposes to triple the "in process" limit at which plutonium is considered a risk from 44 pounds to 132 pounds. LLNL has a history of criticality violations with plutonium, as well as a history of tritium and plutonium releases. This is sufficient evidence that these amounts should be decreased, rather than increased.

6/27.01 4. The draft SWEIS proposes to revive a project that was canceled more than 10 years ago because it was considered dangerous and unnecessary. The project, Plutonium-Atomic Vapor Laser Isotope Separation (AVLIS), is now called the Integrated Technology Project (ITP) and Advanced Materials Program (AMP). The project would heat and vaporize plutonium and shoot multiple laser beams through the vapor in order to isolate the plutonium isotopes. The ITP/AMP is a risk to environment and human health as well as important non-proliferation initiatives. We believe that the ITP/AMP should be canceled as the AVLIS was canceled in 1990.

7/37.01 5. The draft SWEIS designates LLNL as the testing site for new manufacturing technologies to produce plutonium pits for nuclear weapons. A pit is a softball-sized sphere of plutonium surrounded by conventional explosives that trigger its thermonuclear reaction. DOE says that these new technologies will foster the Modern Pit Facility (MPF), which has been proposed for one of five sites, including LANL and

**Concerned Citizens for Nuclear Safety, Amy Williams, Media Network Coordinator**  
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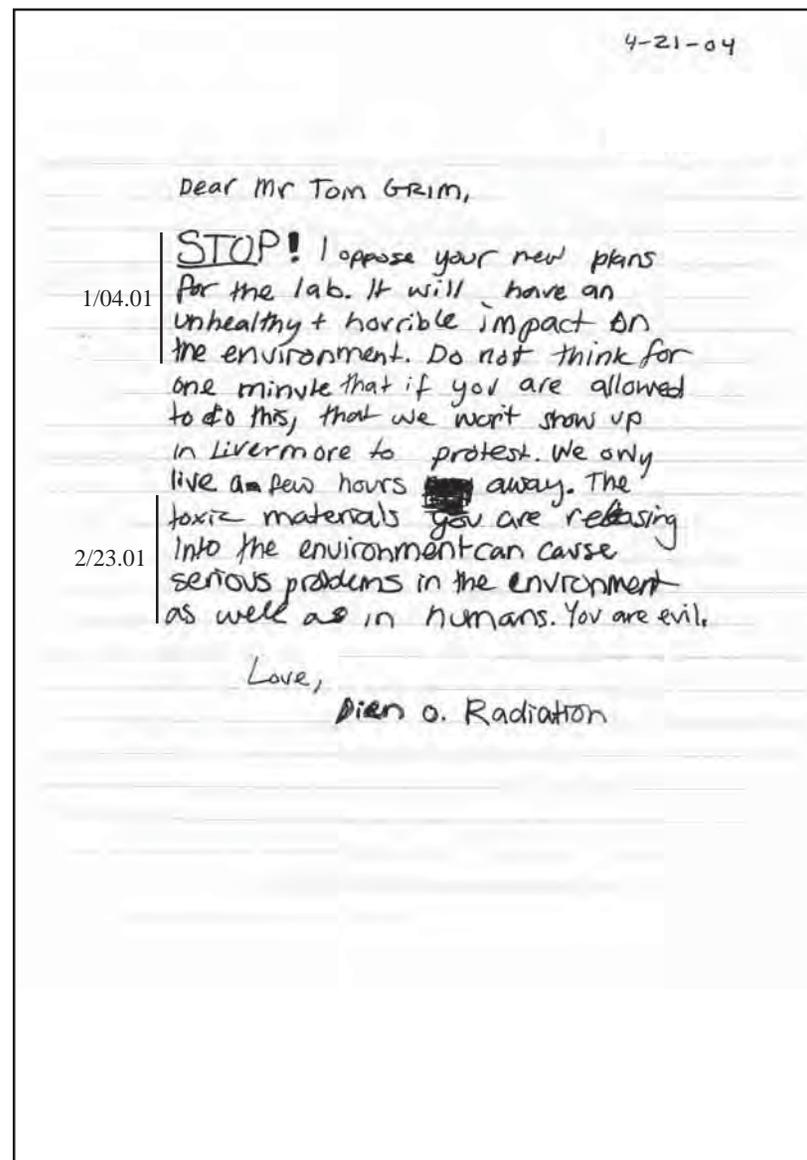
7/37.01 cont.	<p>WIPP. Due to public and congressional pressure, the MPF was indefinitely delayed in January 2004.</p> <p>The LLNL pit program would enable the MPF to produce as many as 500 new nuclear weapons per year. CCNS requests that DOE abandon all plans for research of plutonium pit technologies at LLNL. We believe that it is imprudent and immature to pursue and finance this project considering that the MPF has been delayed.</p>
8/26.01	<p>6. The draft SWEIS indicates expanded quantities of plutonium, highly enriched uranium and lithium hydride at the National Ignition Facility (NIF) at LLNL. Using these materials at NIF will increase its utility for nuclear weapons development, including design of new types of nuclear weapons. It will also make NIF more hazardous to workers and the environment.</p>
9/26.03	<p>This is not only a risk to public health and safety and non-proliferation initiatives, but it will also result in high costs to the taxpayer. No cost estimate for this proposal has been released as yet. CCNS requests that DOE cancel these dangerous, polluting and unnecessary new experiments at NIF.</p>
10/26.04	<p>7. The draft SWEIS includes plans to manufacture tritium targets at LLNL. These targets are radioactive tritium-filled fuel pellets that NIF's 192 laser beams shoot in an attempt to create a thermonuclear explosion. Producing these targets will increase the amount of tritium that may be used in any one room at LLNL at any given time from 3 grams to 30 grams, a tenfold increase.</p> <p>In the 1990s, LLNL stated that target fabrication would occur offsite because of LLNL's proximity to large populations. Further, LLNL has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. CCNS requests that DOE cancel plans to manufacture tritium targets for NIF at LLNL. Moreover, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be considered in the SWEIS.</p>
11/39.01	<p>8. The draft SWEIS also calls for LLNL to develop diagnostics to enhance the nation's readiness to conduct full-scale underground nuclear testing. This is a retroactive position that is directly contrary to the Comprehensive Test Ban Treaty, of which the U.S. is a signatory. All work to enhance test readiness should be terminated immediately.</p>
12/35.01	<p>9. The draft SWEIS calls for co-locating a Biosafety Level-3 (BSL-3) facility with nuclear weapons activities in a classified area at LLNL. The plan proposes genetic modification and aerosolizing of live, deadly bioagents such as anthrax, tuberculosis, smallpox and plague. This would weaken the international biological weapons treaty and it poses a risk to workers, public health and safety and the environment. The draft SWEIS does not adequately address these programs or their consequences. Construction of the portable BSL-3 facility should be halted immediately. All plans to operate a BSL-3 facility at LLNL should be abandoned immediately.</p>
13/14.01	<p>10. There are 108 buildings at LLNL identified as having potential seismic deficiencies relative to current code. The draft SWEIS should include a complete list of</p>

**Concerned Citizens for Nuclear Safety, Amy Williams, Media Network Coordinator**  
**Page 4 of 4**

13/14.01 cont.	<p>these buildings and an accounting of the dangerous radioactive, chemical, hazardous or biological materials that are stored within them. LLNL is located within one kilometer of two significant earthquake faults, including the Las Positas fault zone, less than 200 feet from the LLNL boundary. DOE must stop immediately all work done in buildings at LLNL that are not in full compliance with earthquake safety code.</p>
14/22.01	<p>11. More than 1,000 drums of transuranic and mixed transuranic waste are scheduled to be transported from LLNL to WIPP. This action and its consequences, not only at LLNL but also along all transportation routes from LLNL to WIPP, must be included in the draft SWEIS.</p>
15/20.05	<p>12. The draft SWEIS does not mention that DOE is currently considering replacing the double-walled shipping containers currently used for WIPP shipments with single-walled containers that may compromise human health and safety. CCNS believes that no waste should be shipped from LLNL to WIPP until it is guaranteed that DOE will use nothing but double-walled containers. The draft SWEIS should contain this guarantee.</p>
16/01.01	<p>13. The Purpose and Need statement in the draft SWEIS relies heavily upon the classified U.S. Nuclear Posture Review, which was approved with no public comment and calls for an aggressive modernization and manufacturing base in the U.S. nuclear weapons complex. This is directly contrary to requirements under the nuclear Non-Proliferation Treaty of 1970 (NPT), which requires the U.S. to shift from "developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal." CCNS requests that DOE revise the Purpose and Need statement to include U.S. requirements under the NPT.</p>
17/07.01	<p>Further, the Purpose and Need Statement in the draft SWEIS nearly omits LLNL's important role in civilian science research. This omission flaws the alternatives analysis in the draft SWEIS by neglecting to consider the expanded role that civilian science programs could play at LLNL in the next decade.</p>
	<p>The alternatives analysis should consider LLNL's role in light of commitments to the NPT and its civilian science mission.</p>
	<p>Thank you for your consideration of these comments. Should you have any questions or comments, please feel free to contact me by email at <a href="mailto:awilliams@nuclearactive.org">awilliams@nuclearactive.org</a> or by telephone.</p>
	<p>Sincerely,            Amy Williams          Media Network Coordinator</p>

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Congress, Laura  
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Courtright, Caroline  
Page 1 of 1

Courtright, Caroline  
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**Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration**



**Written Comment Form**  
*Must be received on or before May 27, 2004*

*Mr. Grim*

1/07.01 PLEASE, instead of proposing new weapons projects at LLNL, the DOE should enhance the peaceful, civilian scientific capabilities & mission at LLNL by proposing new unclassified programs in environmental cleanup, non-polluting renewable energy, earth sciences, astrophysics, atmospheric physics & others.

2/06.01 If a choice was to be made from the 3 alternatives in the EIS, choose only the "Reduced proposal". However I feel the EIS is

3/24.03 FATAALLY FLAWED because it never mentions that LLNL + SITE 300 are both on the Superfund List. I believe a new EIS needs to

4/31.02 be drafted & opened for public comment. CLEAN UP contamination

5/24.02 on data sites before increasing dangerous polluting activities.

6/04.01 Do NOT increase storage capabilities for PLUTONIUM OR TRITIUM. Do NOT revive the Plutonium Atomic Vapor Laser Isotope Separation. Do NOT expand use of NIF. Do NOT expand MPF. Do NOT expand Bio-warfare agent research facility. CLEAN UP LLNL + SITE 300. DO NOT expand.

*Thank you,*  
CAROLINE COURTRIGHT

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1770

12025 Lakeside Dr  
Grass Valley, CA  
95949

1/06.01

2/31.04

3/01.01

4/04.01

5/07.01

Dear DOE:

Here is my comment on the draft Site-wide Environmental Impact Statement for Lawrence Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility," fissioning plutonium in the NIF mega-laser; and vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

Signed: *Caroline Courtright*

Address: 12025 Lakeside Dr  
Grass Valley, CA 95949

**To:** 00662  
RECEIVED MAY 13 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA  
94550

Cousino, Val  
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Cousino, Val  
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1/04.01  
2/01.01  
3/23.02  
4/14.01  
5/30.01  
3/23.02 cont.

J. Cousino  
San Jose  
 Dear Sir -  
 Mr. Thomas G.  
Livermore  
 As a concerned citizen,  
 I would like to strongly urge  
 you to oppose the bush Administration  
 plan to expand nuclear testing, create  
 plutonium using lasers, and tripling the  
 amount of plutonium & its waste  
 stored on site. Presuming/ increasing  
 nuclear testing will surely induce  
 other countries to do the same,  
 thus resuming cold war nuclear  
 proliferation and possibly increasing  
 retaliatory or terrorist acts.  
 Creating plutonium with lasers  
 is much easier to conceal, an advantage  
 to terrorists and other subversives &  
 criminals. There are also very  
 serious health, safety, & environmental  
 concerns for those of us right here  
 at home. Livermore is between 2  
 earthquake faults, and is near very  
 densely populated areas. There is  
 great danger of seismic activity, the  
 very real threat of theft or sabotage,  
 and tenfold increase of radiation  
 exposure for those living close to  
 the lab. Increased exposure causes

3/23.02 cont.  
1/04.01 cont.

Neuro-muscular degenerative disease, immune  
 system damage, cancer and many other deadly  
 conditions. We, the working classes, are  
 desperate for employment right now, and in  
 the equal line is that this will create jobs  
 then people will be all for it. Please assist  
 us in getting the true factual information out  
 to the public. As a working class citizen, I  
 am extremely concerned about the long-term  
 health, safety, security and environmental  
 effects this will have on my fellow citizens.

I implore you to join us in opposing  
 this heinous plan. If there is any other  
 action that I can take to assist in stopping  
 this, please keep me informed, a response  
 would be greatly appreciated, thank you  
 for your time & consideration.

Sincerely,  
 Ms. Val Cousino  
 concerned American  
 Tax paying voter  
 436 Richmond Ave  
 San Jose Calif 95128

**Darr, Norma**  
**Page 1 of 1**

**Dayaneni, Gopal**  
**Page 1 of 1**

-----Original Message-----  
 From: Norma Darr [mailto:nmd403@earthlink.net]  
 Sent: Tuesday, May 18, 2004 6:04 PM  
 To: Mr. Tom Grim  
 Subject: New Nuclear Weapons Program

Norma Darr  
 228 San Juan Ave., #1  
 Venice, CA 90291

May 18, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

1/04.01 I am writing to support my elected California representatives in opposing plans to initiate and/or expand nuclear weapons programs at the Lawrence Livermore Labs. This is ill-advised for many important reasons, including environmental safety and domestic security, but most important is the danger of escalating the nuclear arms race in the midst of the U.S.'s extremely volatile political relations in the Middle East and among our allies.

Sincerely,

Norma Darr

Gopal Dayaneni  
 1538 Martin Luther King Jr Way  
 Berkeley, CA 94709

May 28, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

Please accept my comments regarding the proposed expansion of nuclear weapons and biological agents development.

1/04.01 As a resident of the Bay Area, I must strongly express my opposition to these proposed expansions in the operations at the lab.

2/35.01 Genetically engineered biological agents present dangers which our countries Secretary of Defense would term, "knows and unknowns." The precautionary principle (better safe than sorry) would demand of us much greater caution.

3/31.06

4/30.01 Just this week, we have been warned of greater threats by "terrorists." Increasing the handling, storage and experimentation with radiological and biological materials is unsafe and insecure.

5/02.01 Mini-nukes and bunker-busters- are tools for killing, and have no place in a the world of science. We should head the warnings of Einstein and others who lived through the development of the A-Bomb- this is bad science.

1/04.01 For reasons of safety (there is no way to guarantee safe handling of radiological and biological materials); security (there is no way to guarantee that the facility is secure from outside influences- as has been established in recent months); community health (we all know that this lab has exposed the local community to elevated levels of radiation and has caused cancers); global responsibility (we must reduce the threat of WMD, not create it) and plain common sense, I oppose any expansions of nuclear weapons and biological agents research.

cont.

Terrified by our reckless behavior;

**Gopal Dayaneni**

de Bellis, Tony  
Page 1 of 1

Dennis, Amy  
Page 1 of 1

 **Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement**  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**  
*Must be received on or before May 27, 2004*

DEAR NNSA:

1/30.01 INCREASING THE PLUTONIUM LEVELS INVITES  
A TERRORIST ATTACK

2/25.08 YOUR ASSESSMENT WAS FOR A SINGLE-  
ENGINE PLANE.

CONSIDER THE DAMAGE --- (FINANCIAL,  
PERMANENT RADIOACTIVE, AND MENTAL)  
TO THE GREATER BAY AREA ---  
FOREVER --- IF A 747 HIT L.A.L.

NOW CONSIDER THE POLITICAL POSITION  
OF THE BUSHIES.

Tony de Bellis  
231 KISS ROAD  
DANVILLE CA 94526

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

Amy Dennis  
501 Shady Lane  
Ojai, CA 93023

May 19, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/04.01 Nuclear weapons hurt everyone, not just the desired targets. Using  
weapons of this type is a lose/lose situation.

Think big, think long-range. More nuclear weapons are not needed. Jobs  
can be created in other areas of defense and/or manufacturing.

Sincerely,

Amy Dennis

Department of California Highway Patrol,  
D.O. Helmick, Commissioner  
Page 1 of 2

Department of California Highway Patrol,  
D.O. Helmick, Commissioner  
Page 2 of 2

State of California—Business, Transportation and Housing Agency    ARNOLD SCHWARZENEGGER, Governor  
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL  
P. O. Box 942888  
Sacramento, CA 94293-0001  
916-657-7152  
(800) 735-2529 (TDD)  
(800) 735-2522 (Voice)



June 3, 2004

File No.: 1.62.A10006.4-0254

Mr. Thomas Grim, Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

RE: LAWRENCE LIVERMORE NATIONAL LABORATORY DRAFT ENVIRONMENTAL  
IMPACT STATEMENT

Dear Mr. Grim:

The California Highway Patrol (CHP) respectfully submits the following comments in response to the U. S. Department of Energy's Draft Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory (LLNL) and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (EIS).

Under the proposed action the transportation of waste, including hazardous and radioactive, is expected to increase from 88 shipments per year to 310 shipments per year, and the annual number of radioactive, chemical and explosives shipments is expected to increase from 470 to 600. In addition, the proposed action will result in a significant increase in the amount of plutonium inventory at LLNL, including an increase from 20 to 60 kilograms of fuel-grade equivalent plutonium in the plutonium facility and an increase from the proposed goal of 200 kilograms in 1992 to 1,500 kilograms in 2004. The CHP is concerned with the security and safe transport of these materials and the potential risk of an accident or terrorist attack upon any shipment going to or from LLNL. The EIS does not adequately address the issues related to radioactive and hazardous waste volume reduction onsite and the safe transport of radioactive materials/waste to and from LLNL.

In general, the draft EIS lacks sufficient information regarding increased radioactive shipments to and from LLNL and the impact they will have on safety and security. Currently, LLNL is not licensed as a hazardous waste disposal facility. Therefore, once the materials have passed their useful life, the materials will have to be transported off-site for disposal to a licensed waste facility.



Mr. Thomas Grim  
Page 2  
June 3, 2004

1/20.01  
cont.

The EIS should provide more complete information on the numbers and types of highway route-controlled quantity shipments to and from LLNL, including the maximum allowable quantities shipped for each type of material, packaging used, shipment modes and routes, and route-specific data including recent population and truck accident data for shipments along the proposed routes. The EIS should also identify circumstances where National Nuclear Security Administration personnel may escort shipments for security reasons.

We appreciate the opportunity to comment on this very important EIS. Should you desire further information regarding this issue, please do not hesitate to contact me or Chief Adam Cuevas, Enforcement Services Division, at (916) 445-3253.

Sincerely,  
  
D. O. HELMICK  
Commissioner

1/20.01  
2/22.02

Department of Toxic Substances Control, Paul E. Ruffin, P.E.,  
Supervising Hazardous Substances Engineer I  
Page 1 of 3

Department of Toxic Substances Control, Paul E. Ruffin, P.E.,  
Supervising Hazardous Substances Engineer I  
Page 2 of 3



Terry Tamminen  
Agency Secretary  
CalNEPA



Department of Toxic Substances Control

Edwin F. Lowry, Director  
8800 Cal Center Drive  
Sacramento, California 95826-3200



Arnold Schwarzenegger  
Governor

May 26, 2004

Mr. Thomas R. Grim  
Document Manager  
U.S. Department of Energy  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, California 94550-9234

**COMMENTS ON THE LAWRENCE LIVERMORE NATIONAL LABORATORY (LLNL) SITE-WIDE AND SUPPLEMENTAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (SW/SPEIS)**

Dear Mr. Grim:

The Department of Toxic Substances Control (DTSC) appreciates the opportunity to comment on the above-captioned document. DTSC recognizes the effort expended by the Department of Energy (DOE) in preparing Appendix B of the SW/SPEIS, which consolidates discussion of waste operations and addresses potential impact areas identified in the California Environmental Quality Act (CEQA) Initial Study format. This format was suggested in DTSC's letter to the DOE on December 2, 2002. The Standardized Permitting and Corrective Action Branch circulated the LLNL SW/SPEIS and Appendix B for comment to the Site Mitigation and Brownfields Reuse Program and the Environmental Analysis and Regulations Unit. DTSC's consolidated comments are presented below for your consideration.

General Comments

DTSC may perform an environmental analysis when complying with CEQA for discretionary decisions on proposed projects, which could include permit renewals, permit modifications, corrective action, or closure plans. As indicated in the SW/SPEIS, LLNL may propose these types of projects to DTSC in the future. DTSC intends to use the LLNL SW/SPEIS and Appendix B as a resource in developing environmental setting information when conducting CEQA evaluations for proposed projects at LLNL. In addition, DTSC may also consider the risk of upset analysis scenarios for the hazardous waste management facility processes in its CEQA analyses.

♻️ Printed on Recycled Paper

Mr. Thomas R. Grim  
May 26, 2004  
Page 2

1/22.03 DTSC recently updated the Initial Study format and eliminated the Special Initial Study. Therefore, remove all text references in the SW/SPEIS to the word "special." There is now only the Initial Study.

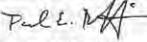
Specific Comments

2/25.02 Chapter 5, Section 5.5.2, Chemical Accident Scenarios, and Section D.3, Accident Scenarios Involving Toxic Chemicals: It is not clear whether the actions in Table B.3-3, Summary of Permit Actions and Other Waste Management Actions by Alternative, were considered during the selection process for accident scenarios. In particular, was the storage of hazardous and mixed waste in Building 696R considered in the evaluation of chemical accident scenarios? Table 5.5.2.2-1, Potential Chemical Accident Consequences, and Table D.3.2-1, Potential Chemical Accidents, do not include Building 696R.

3/22.07 Appendix B, Section B.1.3, Waste Management Facilities at the Livermore Site: Building 419 has undergone a series of partial closure activities, but additional closure work may be required. DTSC received a "Final Closure Plan for Building 419," dated February 28, 2001, which is pending review and approval. The Building 419 closure should be discussed in the SW/SPEIS in a manner similar to the descriptions for Building 233. Although the Closure Plan proposes a risk-based clean closure, it leaves an option for the possibility of post-closure care, if clean closure cannot be achieved. This option should be considered in your discussion.

4/25.02 Appendix D, Section D.3.2.10, Buildings 514/612/625/693, Radioactive and Hazardous Waste Management Complex – Earthquake Release of Freon-22: The accident scenario includes an assumption that process reagents stored in 55-gallon drums are not stacked too high. The Hazardous Waste Facility Permit for the LLNL Main Site would allow stacking of 55-gallon drums. Permit condition IV.9.(d) restricts stacking of containers, other than 4'x4'x7' boxes, to a maximum height of eight (8) feet.

If you have any further questions regarding this review, please contact me at (916) 255-6677 or Ms. Nicole Sotak, Office of Environmental Analysis, Regulations and Audits, at (916) 327-4506.

Sincerely,  
  
Paul E. Ruffin, P.E.  
Supervising Hazardous Substances Engineer I  
Standardized Permitting and Corrective Action Branch

cc: See next page

Department of Toxic Substances Control, Paul E. Ruffin, P.E.,  
Supervising Hazardous Substances Engineer I  
Page 3 of 3

DeVinney, Jean  
Page 1 of 1

Mr. Thomas R. Grim  
May 26, 2004  
Page 3

cc: Ms. Nicole Sotak  
Office of Environmental Analysis, Regulations and Audits  
Department of Toxic Substances Control  
1001 "I" Street, 22<sup>nd</sup> Floor  
P.O. Box 906  
Sacramento, California 95812-0806

Mr. Ted Park  
Site Mitigation and Brownfields Reuse Program  
Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710

5980 Westover Drive  
Oakland, CA, 94611  
April 17, 2004

Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA., 94550

Dear Mr. Grim:

1/04.01

I have been following the nuclear activities at Livermore Lab for the past 10 years. I am particularly concerned and appalled with the new plans of storing double the plutonium, producing plutonium pits, "enhancing" readiness to conduct underground nuclear tests, and allowing manufacture of tritium targets for the NIF.

2/02.01

The development and testing of new nuclear weapons is a travesty to all mankind and should be stopped. The obsession with the need for a nuclear arsenal of the size we currently have and then increasing that with newer more useable weapons should be stopped at all costs. There simply has to be a better way to insure our safety from terrorism or war.

3/23.01

The Livermore Lab sits in a large and growing community that should not have to be subjected to the possibility of a leak, underground pollution or having biological weapons stored near to them.

The possible cost to lives, environment and the statement it makes about the U.S. proliferation to the rest of the world is not worth whatever the perceived benefits from these plans.

Sincerely,



Jean DeVinney

Dionisi, Dave  
Page 1 of 1

Donahue, Peggy and Mike  
Page 1 of 1

-----Original Message-----  
 From: Dionisi@aol.com [mailto:Dionisi@aol.com]  
 Sent: Thursday, May 13, 2004 8:21 AM  
 To: tom.grim@oak.doe.gov  
 Subject: Disapproval of Proposed 10 Year Plans

May 13, 2004

Mr. Tom Grim  
 US DoE, National Nuclear Security Administration  
 L-293, 7000 East Avenue  
 Livermore, California 94550

Dear Mr. Grim:

I am a private citizen that believes the plans to expand the Lawrence Livermore facility are harmful to the our national security as well as our environment.

Please do not:

- \* Double the amount of plutonium available for research, from 1,540 pounds to 3,300 pounds;
- \* Revive the plutonium atomic vapor laser isotope separation project;
- \* Produce new plutonium pits for nuclear weapons;
- \* Increase the amounts of plutonium, uranium and lithium hydride available for experiments in the National Ignition Facility;
- \* Manufacture tritium for use in thermonuclear experiments at the National Ignition Facility;
- \* Enhance the readiness for full-scale underground nuclear testing; and
- \* Construct a Bio-Safety Level 3 facility at Livermore to experiment with bio-toxins and biological agents including anthrax, bubonic plague, botulism, and even genetically modified lethal bio-warfare agents.

Sincerely, Dave

David Dionisi  
 80 Keystone Way  
 San Francisco, CA 94127

1/04.01

-----Original Message-----  
 From: Peggy & Mike Donahue [mailto:summits@earthnet.net]  
 Sent: Saturday, May 01, 2004 10:39 AM  
 To: tom.grim@oak.doe.gov  
 Subject: Livermore

Dear Sir,

1/04.01 This note is being written to express extreme opposition to the proposed expansion at Livermore National Laboratory east of San Francisco. The plan purportedly triples the amount of plutonium that scientists can work with at any one time while also greatly increasing the potential for an accidental chain reaction. Additionally, the plan will add plutonium, highly-enriched uranium and lithium hydride to experiments at the NIF (National Ignition Facility), to increase its usefulness for nuclear weapons development. It allows the manufacture of tritium targets for the NIF megalaser. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create controlled thermonuclear explosion. According to Marylia Kelley, of Tri-Valley CAREs (www.trivalleycares.org), producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams. The lab has a history of tritium accidents, spills and releases. Does this pattern sound familiar?

*All of this poses inestimable risk to the workers, the citizens around the lab, the people of the world and the entire plant. It weakens the treaties put in place through tireless work and hard fought negotiations by world citizens who understand full well that nuclear weapons and their threatened use make war not only utterly insane but obsolete in a very practical sense.*

Thank you for your time and thanks in advance for wisely and immediately stopping this DOE plan.

Sincerely,  
 Peggy & Mike Donahue  
 Concerned Citizens

Drebmeier, Peter  
Page 1 of 1

	4/21/04
	Dear Mr. Grim,
1/02.01	I am very opposed to any expansion in nuclear weapons research and development at Lawrence Livermore Lab. This deadly work should cease at once!
2/33.01	Living in the Bay Area, I am very concerned about the proposal to double the amount of plutonium so close to home. The thought of the lab producing up to 450 bomb cores annually is frightening.
3/37.01	I worked hard in the early 1990s to stop nuclear testing, and will continue to protest any proposals to resume nuclear testing.
4/39.01	Please do everything in your power to stop the EIR for Lawrence Livermore's next 10 years of operation. It is time to protect our national security through environmental cleanup, not more weapons of mass destruction.
5/07.01	
	Sincerely, Peter Drebmeier 3153 Stelling Dr. Palo Alto, CA 94303

Duane, Judy  
Page 1 of 2

	-----Original Message----- From: judyduane@fastmail.fm [mailto:judyduane@fastmail.fm] Sent: Monday, April 26, 2004 4:01 PM To: tom.grim@oak.doe.gov Subject: Public Comment on the Environmental Impact of Lawrence Livermore Lab
	To: Mr. Tom Grim Department of Defense
	Dear Mr. Grim:
	As a member of the public, I wish to provide my input regarding the environmental impact of Lawrence Livermore Lab in the past, present and future, as follows:
1/04.01	<ol style="list-style-type: none"> <li>1. In the past, this facility has been a danger to the health and the life, not only of human beings in the area, but to those in the entire world, because of its purpose--which is to create the ability to kill and harm life itself in a catastrophic manner. The types of harmful products being developed and tested there are anathema to life and to the earth, in themselves, and should be banned.</li> <li>2. In the present, the situation described above is still in effect, and should be banned.</li> <li>3. In the future, which this environmental impact statement for Lawrence Livermore Lab addresses, I understand that the DOE and Livermore Lab plan to <ol style="list-style-type: none"> <li>a. More than double the plutonium limit at the lab from 1,540 to 3,300 pounds.</li> <li>b. Manufacture prototype plutonium bomb cores (pits) on site.</li> <li>c. Heat plutonium and shoot multiple laser beams through the vapor cloud, in an attempt to create a nuclear explosion.</li> <li>d. Manufacture tritium targets (radioactive fuel pellets).</li> <li>e. Undertake a speedy return to full-scale nuclear testing.</li> <li>f. Import live anthrax, plague and other pathogens, co-locating a bio-warfare agent research facility with nuclear weapons.</li> </ol> </li> </ol>
	There is already an increase in cancer rates around the Lab.
	The Lab sits on two earthquake faults.
	Microscopic amounts of some or all of the ingredients to be manipulated and stored there can cause lung cancer and carry additional risks.
	The amount of airborne radioactivity emanating from the Lab will be increased, while the Lab already has a history of tritium accidents, spills and releases.

**Duane, Judy**  
**Page 2 of 2**

2/39.01 | The Lab would be taking a dangerous step back to the days of unrestrained nuclear testing by pursuing the development of diagnostics to enhance the nation's readiness to conduct nuclear testing.

1/04.01 | I vehemently oppose any and all of the above proposed changes, and I ask that the work that is presently being done there that I have addressed in this letter be stopped, as well.  
 cont.

Thank you for your morally conscious attention to my input.

Sincerely,

Judy Duane  
 --

judyduane@fastmail.fm

**Duane, Judy**  
**Page 1 of 1**

To: Mr. Tom Grim  
 Dept. of Energy

Dear Mr. Grim:

1/04.01 | I am vehemently opposed to the proposed changes and additions to the program at Lawrence Livermore Lab, as well as the the existence of the present program.

Any one of these facts--that the Lab sits on two earthquake faults, that it has a history of tritium accidents, spills and releases, and that there is already an increase in cancer rates around the Lab, should be enough to terminate the present program, let alone allow the consideration of an increase in its operations.

2/06.01 | I urge you to cancel any further plans to add to the program, and I urge you to terminate the present program.

Please listen to your conscience in considering the best and the right decision on this extremely important matter. The environment of the Lab is depending on you, and the world awaits your ethical judgment.

Thank you so much for your very conscious attention to what I have said.

Sincerely,

Judy Duane  
 --

judyduane@fastmail.fm

Duncan, Susan  
Page 1 of 1

Dunham, Rodger  
Page 1 of 1

FROM THE DESK OF **GOD**  
 RECEIVED MAY 19 2004

1/04.01

I, Susan Duncan not God,  
 am totally against any  
 increase in the nuclear  
 weapons activities at  
 Livermore Lab.

This seems like a bad  
 penny that just keeps on  
 coming back - tho it is  
 much more than a penny  
 4-7-04

Sincerely yours  
 Susan Duncan

 Susan Duncan  
 1475 Mountain Blvd  
 Oakland CA 94611-2009

1/06.01  
 2/31.04  
 3/01.01  
 4/04.01  
 5/07.01

\* ONLY CONSIDER REDUCED OPERATOR ALTERNATIVE  
 \* EIS PLANNED MUST REDO.

Dear DOE:  
 Here is my comment on the draft Site-Wide  
 Environmental Impact Statement on Livermore  
 Lab operations over the next 20 years. The  
 SWEIS calls for major increases in nuclear weapons  
 design and manufacture. New plutonium  
 activities include: raising the inventory from  
 1,540 pounds to 3,300 pounds; tripling the  
 amount "at risk" at one time; creating prototype  
 bomb cores for a new "Modesto Pic Facility";  
 finishing plutonium in the NIF megajoule and  
 vaporizing plutonium oxide on-site to separate  
 isotopes. The SWEIS also reveals plans to increase  
 the "at risk" limit for radioactive tritium 10-fold.

I oppose these actions in the SWEIS that will  
 increase nuclear proliferation and damage our  
 environment. I call on you to analyze conversion  
 of the Lab to peaceful purposes as an alternative.

Signed: Rodger Dunham  
 Address: 17025 Lakeside  
 Grass Valley, CA 95944

RECEIVED MAY 18 2004  
 Mr. Tom Griffin  
 DOE, NNSA, L-293  
 7000 East Avenue  
 Livermore, CA  
 94550

**Dust, Ernest and Arline**  
**Page 1 of 1**

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

From: eadust at earthlink.net [<mailto:eadust@earthlink.net>]

Sent: Monday, April 26, 2004 6:36 PM

To: tom.grim@oak.doe.gov.

Subject: DOE plan for Livermore Lab

1/04.01

We, Ernest and Arline Dust, strongly object to the Department of Energy's plan for Livermore. We cannot risk further nuclear proliferation and the inevitable contamination, perhaps destruction, that may follow.

Ernest and Arline Dust  
462 Pismo Court  
Livermore, CA 94550

Economic Development Alliance for Business, Bruce Kern, Executive Director Page 1 of 2



**EDAB Officers:**  
 -Honorable Keith Carano, Chair  
 Alameda County Board of Supervisors  
 James Falacki, Vice Chair  
 Thursday Foundation  
 Steven Katz, 2<sup>nd</sup> Vice Chair  
 California State University, Alameda  
 Mike Brown, 1<sup>st</sup> Vice Chair  
 Stephen Miller, 2<sup>nd</sup> Vice Chair  
 Edward Del Bosca, Past Vice Chair  
 Oakland International  
 Leah Wasserman, General Counsel  
 Wash. State, West O. House

**EDAB Board of Directors:**  
 Honorable Irma L. Anderson  
 City of Richmond  
 Stephen Bruck  
 Stephen Bruck, 2<sup>nd</sup> Assistant  
 Betty L. Colby  
 Asset Resources  
 Honorable Roberto Crespo  
 City of Hercules  
 John Dalrymple  
 General Labor Council, Contra Costa  
 Honorable Donald P. Frantz  
 City of Antioch  
 Richard E. Carlsbach  
 Alameda County Board of Supervisors  
 George Granger  
 Contra Costa  
 Honorable Mark Grasso  
 Contra Costa  
 Lisa Hamann  
 J/PCV, Lead 120  
 Joseph Harshbarger  
 Oakland International Chamber  
 Will Hardie  
 Pacific Gas & Electric Company  
 Michael Harari  
 East Bay Community Foundation  
 Tim Huser  
 4075 Development Technology Road  
 Honorable Hector Johnson  
 City of Hayward  
 Honorable Sheila Jordan  
 Alameda County Office of Labor  
 Dr. Horley Mitchell  
 University of California, Berkeley  
 Susan S. Muscardi  
 Alameda County  
 Ed Pennock  
 West Contra Costa College, (ex. MIT) 1501  
 Kevin Pitt  
 East Bay Business Union  
 Honorable Larry Wood  
 Contra Costa  
 Suzanne Richmond  
 J/PCV, Contra Costa  
 Ron Wassenaar  
 Board of the County of Alameda  
 Honorable Douglas Waters  
 Contra Costa County Board of Supervisors  
 John Swettenham  
 Contra Costa County  
 Tim Yoshitani  
 City of Oakland  
 Cynthia Watson  
 Contra Costa County Board of Supervisors

1721 Oak Street, Suite 555  
 Oakland, California 94612  
 Tel: (510) 272-3874  
 Fax: (510) 272-3007  
 Website: www.edab.org

1/04.01, 15.01

May 25, 2004

Mr. Thomas Grim, Document Manager,  
 U.S. Department of Energy/National Nuclear Security Administration  
 Livermore Site Office  
 7000 East Avenue, L-293  
 Livermore, CA 94550-9234

Dear Mr. Grim,

The Economic Development Alliance for Business (EDAB) is a regional economic development organization representing Alameda and Contra Costa counties, the East Bay of the San Francisco Bay region. We are a public/private organization with a membership that includes local government agencies (including eighteen cities), non-profit organizations and private sector members. We appreciate this opportunity to offer our comments on the social and economic impacts of Lawrence Livermore National Laboratory (LLNL) on our local region:

**The Lab is part of the foundation of the East Bay's knowledge-based economy.** East Bay headquarter companies such as Chiron, Bayer Healthcare, Bio-Rad, Berlex, UTStarcom, PeopleSoft, Sybase, Lam Research, Logitech and hundreds of smaller technology companies clearly indicate the importance of science and technology to the East Bay's economy. By some counts, the East Bay has more biotech companies than San Diego and receives more total venture capital investment than all but a few of the nation's states. Through tech transfer, cooperative research, and the spin-off of companies and personnel, LLNL is an important source of the technologies and personnel necessary for the East Bay to compete effectively in the global economy. In turn, the local region supports the Lab -- in deploying homeland security technologies, for example -- by providing other public and private sector technologies, manufacturing expertise, financing, marketing, distribution channels and other business support services that are only available in the world's most successful technology commercialization region. The Lab is an integral part of the regional science and technology infrastructure.

**LLNL contributes to the speed of regional scientific discovery.** The lab's participation in an exceptional regional community of research -- through the training of researchers, participation in local conferences, and collaboration with other major research institutions -- not only benefits LLNL, but has accelerated the region's, and the nation's, understanding of the human genome, nanostructures, climate and a number of other areas. The Lab's research has pushed, and been pushed by institutions such as Berkeley Lab,

Serving Alameda and Contra Costa Counties: *The East Bay's Bright Side of the San Francisco Bay*

Economic Development Alliance for Business, Bruce Kern, Executive Director Page 2 of 2

Sandia National Laboratories, UC San Francisco, Stanford, Berkeley, Stanford Linear Accelerator Center, SRI International, Palo Alto Research Center and NASA Ames to name just a few.

**Lawrence Livermore National Laboratory is a social and economic driver.** The Lab's 8000 employees are highly educated and are a major asset to their communities. They have organized science fairs assisted in curriculum development served as resources for local schools, and participated in many other community affairs. The lab itself has made important equipment contributions to local community colleges, hosts a local branch of UC Davis, and provides assistance to local, minority, women-owned and startup companies. The presence of the Lab and its employees has helped grow a thriving technology-based economy in the surrounding area and helped make the Tri-Valley region one of the highest educated and wealthiest in the nation.

**The Lab's \$1.6 billion annual budget is of major importance to the local economy.** Since the Lab's revenue comes primarily from outside the region, it is an especially important source of revenue and new regional wealth. With approximately \$660 million of the Lab's budget supporting salaries and benefits well above average, the importance of having Lab employees living in our communities to support a high quality of life is apparent. The relatively steady level of revenue and wages also helped buffer the surrounding Tri-Valley area from the much more severe impacts of the 2001 recession that affected our neighbors in the South and West Bay. In addition, the Lab's local purchases have helped support a number of local companies providing scientific, technical, professional and other services.

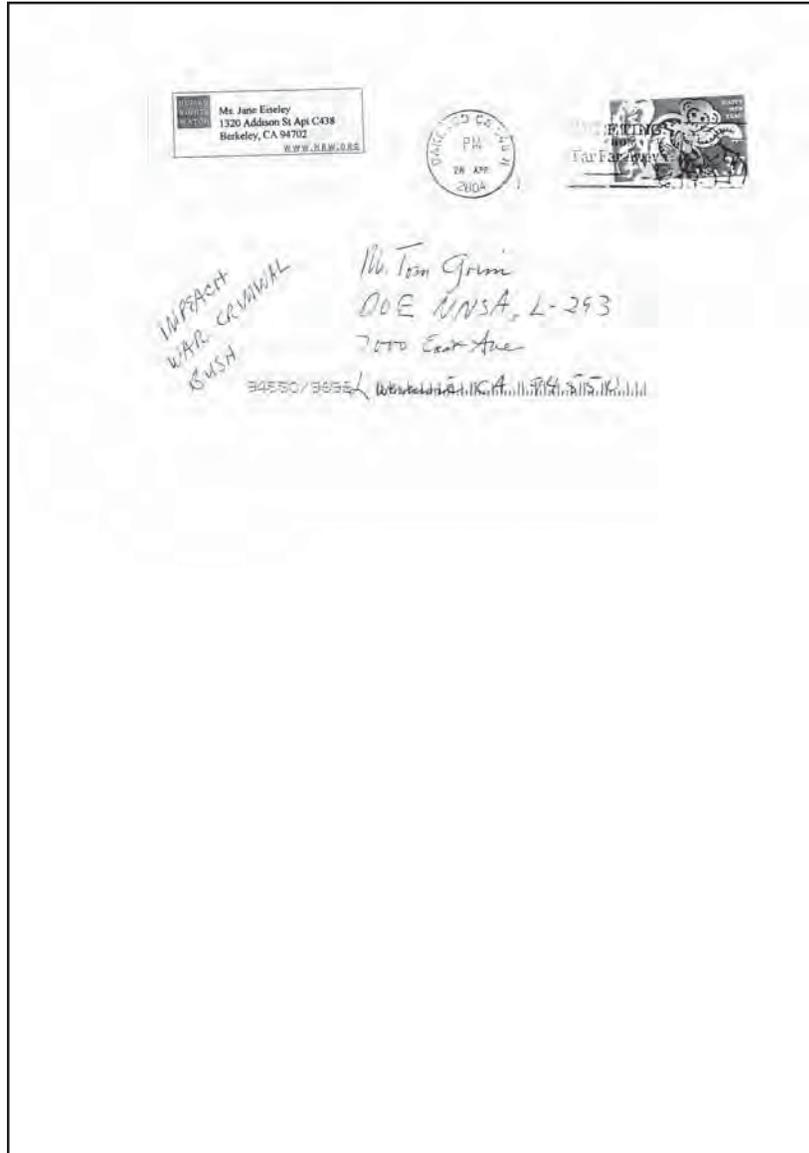
In short, LLNL provides a significant value to the region from the direct funds it brings to the economy, and the companies it creates. But it provides even greater value through the strength it brings to our neighborhoods and communities, the way it complements the activities of one of the largest research communities in the nation, the enabling technologies and vitality it brings to one of the most active commercial development centers in the world, and most of all, the contributions it makes to the security of the entire nation.

Sincerely,



Bruce Kern  
 Executive Director  
 Economic Development Alliance for Business  
 1221 Oak Street, Suite 555  
 Oakland, CA 94612  
 (510) 272-3874

Eiseley, Jane  
Page 1 of 2



Eiseley, Jane  
Page 2 of 2

1320 Addison Street #C438  
Berkeley, CA 94702  
April 28, 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Dear Mr. Grim,

Please include the message below in your record of testimony at the hearings on the DOE Environmental Impact Statement on your planned operations for the next 10 years.

1/04.01 | I am opposed to any expansion that involves the use of plutonium, tritium or other radioactive elements, for the project-specific reasons that I am sure will be made plain during testimony at the hearings.

2/23.01 | It is clear to me that over many years, DOE and Livermore Labs have demonstrated their inability to contain radiation at any of the many sites where it is present.

3/22.02 | Despite consistent efforts to deny or hide the evidence, people have been dying from US government radioactive weaponry and associated research for at least 50 years.

4/03.01 | You do not know how to dispose of radioactive waste.

5/01.01 | You have not dealt with the costs of containment, clean-up or disposal while demanding ever more billions for new projects. Meanwhile US cities and rural areas are blighted with poverty and all its human costs.

I do not believe that nuclear weaponry is necessary for our defense. Defense against whom?

The US has failed to prevent nuclear proliferation. Therefore the stockpiling of weapons and the development of new weapons is a fool's game leading only to more danger.

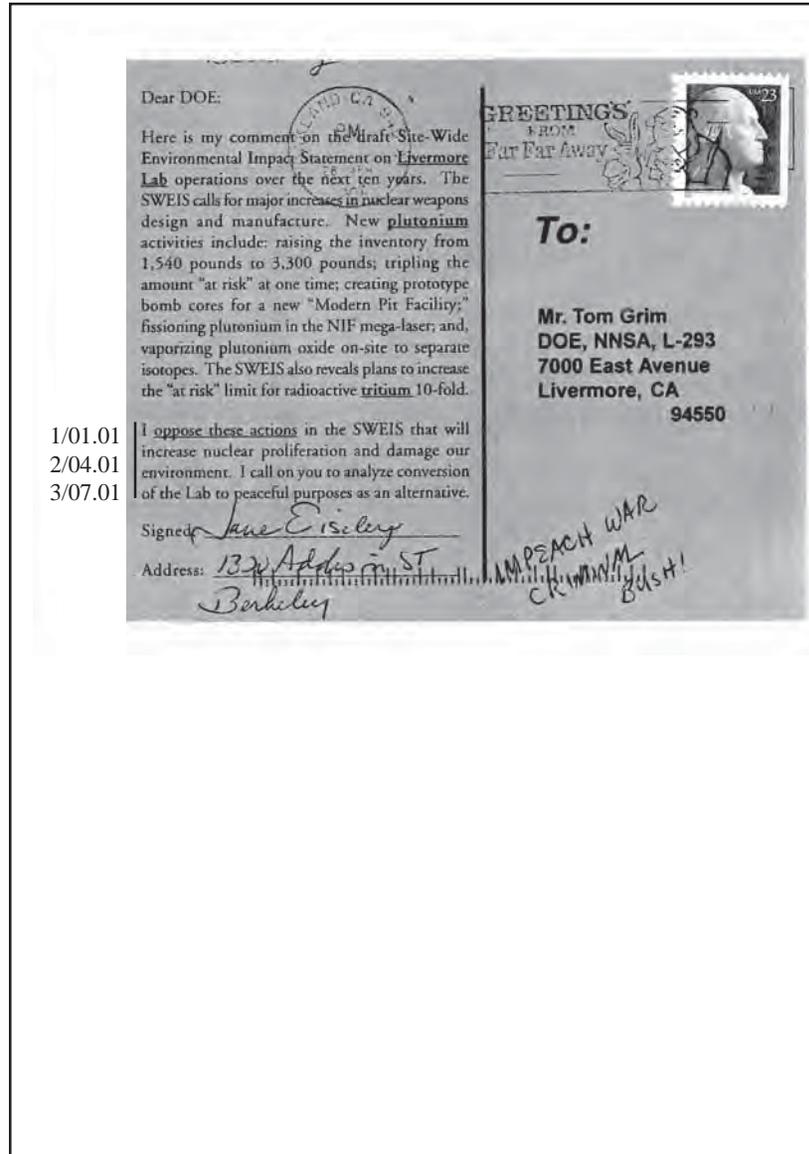
I hope that you will be sincerely informed by the testimony at these hearings and that you will either turn away from the plan as written and begin to explore conversion of Livermore Labs to peaceful, non-nuclear uses, or that you will resign.

Sincerely,  
*Jane Eiseley*  
Jane Eiseley

cc: DOE Secretary Spencer Abraham  
Rep. Barbara Lee  
Senator Barbara Boxer  
Senator Dianne Feinstein  
Rep. Ellen O. Tauscher

Eiseley, Jane  
Page 1 of 1

Elhayek, Jalal  
Page 1 of 1



Dear Mr. Grim:

1/23.03 I am concerned with the manner in which you state the risk of continued operations at LLNL. I assume that a probabilistic assessment was conducted. I wonder how you can state with confidence that there is no risk from radiation when the only experiments possible are those done on rats with high doses of radiation over a short period of time. According to many experts, this does not necessarily provide insight into the effects of low doses of radiation over long periods of time (Silbergeld 1991; Jasanoff 1991). It seems that you must have simply disregarded the uncertainty involved with such a complex issue, and taken what can be currently known as the only important aspect of risk assessment. I think that, considering the potentially fatal nature of the materials at LLNL, this is a foolhardy approach. Also, I have not been convinced that LLNL needs to continue its operations as you have defined them, and therefore question the acceptability any risk at all. Given the fact that we are at risk of suffering irreversible damage to the environment and human health - especially considering LLNL's lackluster history of accidents and mishandling of dangerous materials alluded to in the recent GAO report - isn't this a good opportunity to enact the Precautionary Principle at least in order to give the community at risk an chance to assess the alternatives (O'Brien 1999). I hope that you will familiarize yourself with the references I have provided and consider a different approach to risk assessment.

2/25.06

3/04.01

4/23.02

Thank you,

Jalal Elhayek  
914 Cayuga Street  
Santa Cruz, CA 95062

Sources

Jasanoff, Sheila. "Acceptable Evidence in a Pluralistic Society." In *Acceptable Evidence* ed. Deborah G. Mayo & Rachele D. Hollander. Oxford University Press, Inc. New York, NY. 1991.

O'Brien, Mary. "Alternatives Assessment: Part of Operationalizing and Institutionalizing the Precautionary Principle. In *Protecting Public Health & the Environment*. ed. Carolyn Raffensperger and Joel Tickner. Island Press. Washington, DC and Covello, CA. 1999.

Silbergeld, Ellen K. "Risk Assessment and Risk Management: An Uneasy Divorce." In *Acceptable Evidence*. ed. Deborah G. Mayo and Rachele D. Hollander. Oxford University Press, Inc. New York, NY. 1991.



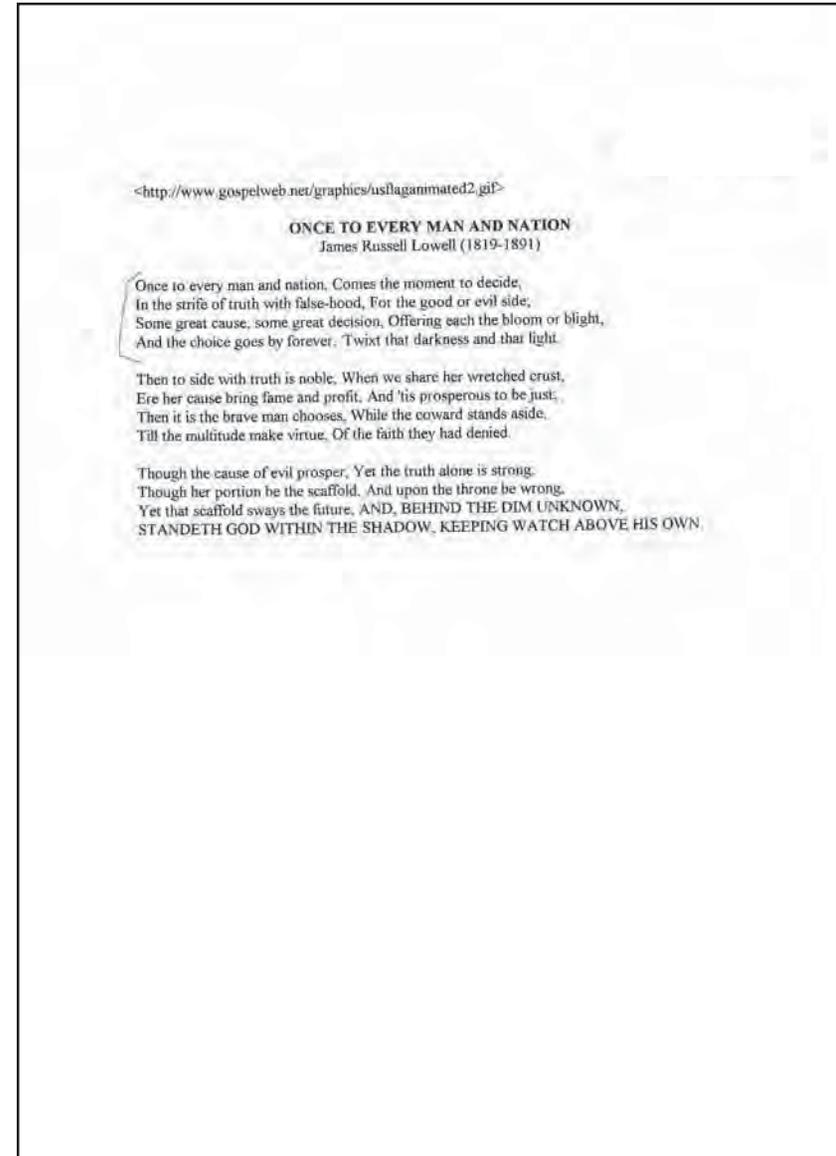
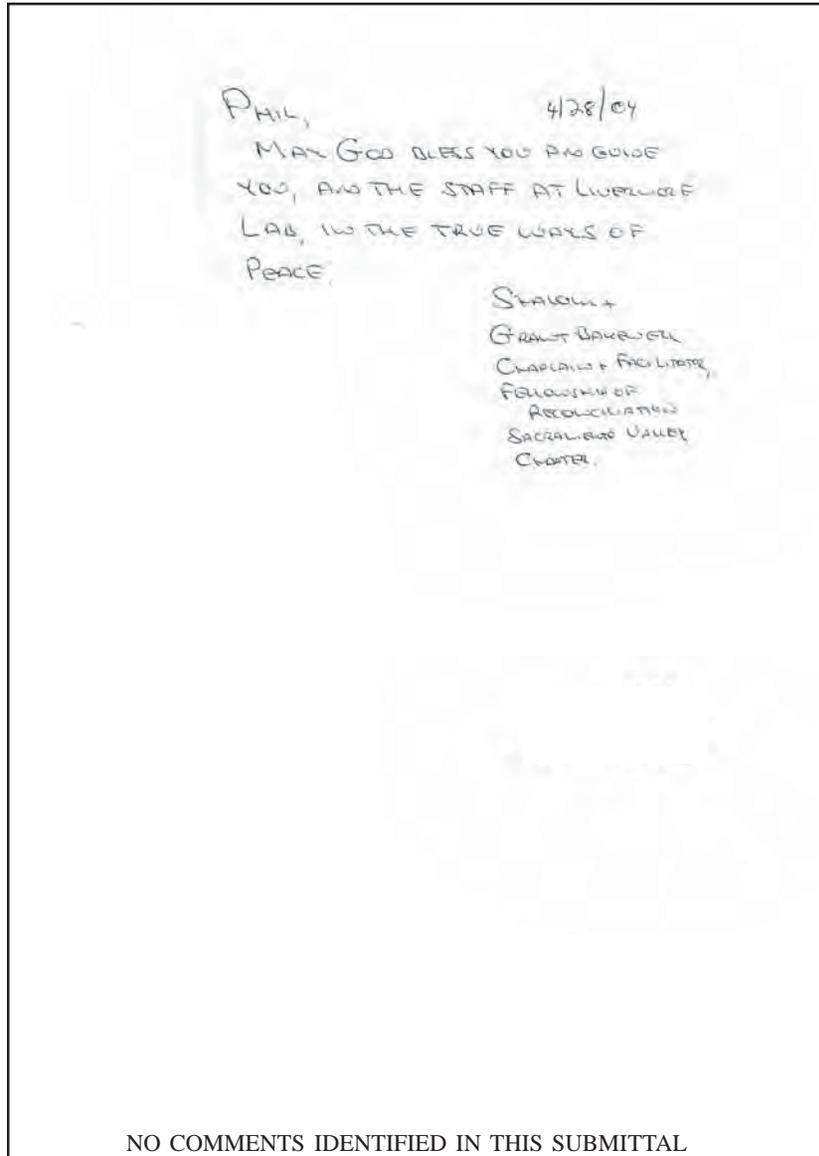
Ericson, Stephanie

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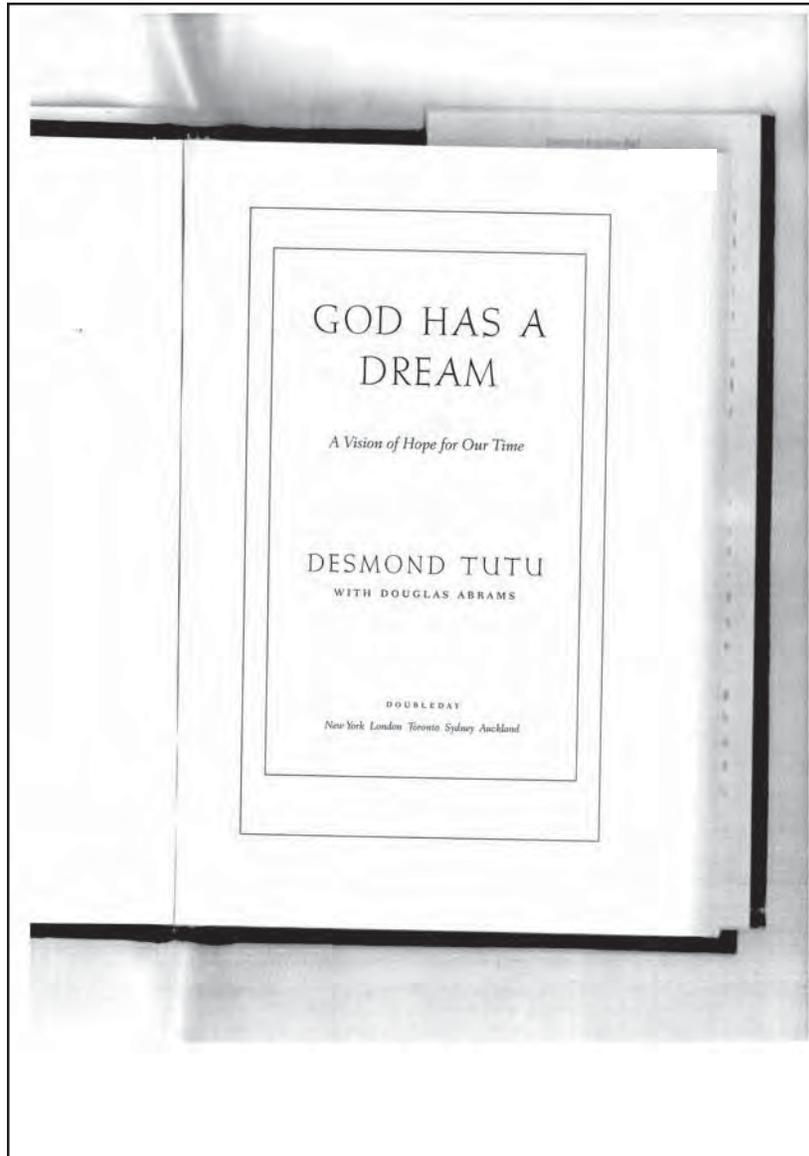
5/37.01	2) Plutonium pit manufacturing. Again this adds risk to the community for something that is not needed to maintain the current nuclear weapons stockpile.
6/02.01	These programs are also directly linked to the intent by the Bush administration to develop new nuclear weapons, such as the Robust Nuclear Earth Penetrator and the so-called mini-nukes. I guess the idea is to make them seem small enough and even cute, maybe, so it becomes thinkable to use them. Like how can a mini-nuke be THAT bad?
5/37.01 cont.	Eventually the DOE plans to construct somewhere a Modern Pit Facility, which would have the capability, if it ran double shifts, to each year produce 900 pits, an amount that I understand is equal to entire nuclear arsenal of China and France.  The purpose of the Livermore pit facility is to work out the bugs of new plutonium pit manufacturing technology prior to large-scale fabrication elsewhere.
7/35.01	While the Lab is working these bugs out, it will become host of bugs of another sort. DOE's proposal to bring bio-warfare agent research to Livermore strikes me as especially wrong-headed. The proposed BSL-3 facility here would allow research on agents with the potential for airborne transmission that can be deadly if untreated, such as anthrax, botulism and the bubonic plague.
8/25.01	Not only am I concerned about the impact of potential accidents in a heavily populated area such as ours, but also about the message we would send to other nations and groups — that the U.S. chooses to do this kind of politically sensitive research in a super secret nuclear facility whose primary mission is military research.
9/01.01	The line between defensive and offensive research in this areas is very thin. By doing it a classified site like this erects tremendous obstacles to oversight, both domestically and internationally. Even if the Bush administration hadn't lowered U.S. credibility recently with false assertions about definitive evidence of WMD in Iraq, do we really expect that "Don't worry. Just trust us." will cut it on this? I don't think so.  It seems to me that this is a recipe for disaster: that, as a nation, we are leading by mis-example.
10/23.01 9/01.01 cont.	I would ask the DOE that it more seriously consider the local health and environmental impacts of these and other new or expanded proposed programs, and, in addition, that it undertake a rigorous review of these programs' potential proliferation impacts for WMD. And I would ask that such a review include the assessments of independent experts who are not connected with DOE by employment or collaborative work.  Thank you.

Fellowship of Reconciliation, Grant Bakewell, Chaplain and Facilitator,  
Sacramento Valley Chapter  
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Fellowship of Reconciliation, Grant Bakewell, Chaplain and Facilitator,  
Sacramento Valley Chapter  
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Fellowship of Reconciliation, Grant Bakewell, Chaplain and Facilitator,  
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Fellowship of Reconciliation, Grant Bakewell, Chaplain and Facilitator,  
Sacramento Valley Chapter  
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Ferneau, Jo  
Page 1 of 4

jo ferneau  
1601 Shoreline Hwy.  
Sausalito, ca 94965

May 27, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Mr Grim,

I was just about to write up my own letter to you when I ran across this California Peace Action email and I feel that it just about covers the most essential points. I would only add a few of my own: 1. Weapons of Mass Destruction are unacceptable for ANY nation, not just our "enemies". We can and should be in the business of working with other nations to eliminate our stockpiles thereby encouraging an atmosphere of trust and cooperation rather than fear, suspicion, animosity, war, etc. 2. We should not be generating more nuclear waste until we can ensure that it can be contained for the duration of its half-life--26,000 years. We already have radioactive waste contaminating water sources all over this country because the facilities don't know what to do with all the waste and so they do stupid things like bury barrels of it in their own backyard (or ship it off to someone else's backyard). the former, I'm sure you're aware, was an incident that happened at Livermore Labs and was only discovered when contractors went to break ground for the NIF. 3. Are you a Christian? What would Jesus do? I'm Buddhist myself and I'm sure that the Buddha would not ensure the safety of his people by building the most destructable bombs ever know to mankind...For that matter, I bet Moses or Ghandi or Martin Luther King Jr. or the Dalai Lama, etc. wouldn't either. Maybe Jerry Falwell would but who's side would you rather be on? 4. More "usable" nuclear bombs? That's just what we need to develop for the ever increasingly resourceful terrorists that may even be working in the labs. Proliferation happens because people design this stuff in the first place. 5. The public, the people, are overwhelmingly opposed to this insanity. I wasn't at the public hearings last month (which is why I'm writing) but I heard from a close friend who went that NOT ONE single person had a positive thing to say for the plan from 7pm on and between 2 and 6pm, only

1/01.01

2/24.01

3/32.04

4/02.01

5/04.01

Ferneau, Jo  
Page 2 of 4

5/04.01  
cont. | 2 people thought that the plan was a winner (members of the city council?). 6. If you love this planet and you want it to be around for your children (if you have them) and your families' children then PLEASE DON'T GO THROUGH WITH THIS! Thank you, I'm impressed if you got this far.

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

6/02.01 | I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

7/08.02 | 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

8/27.01,  
33.01 | 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

9/26.01,  
26.03 | 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make

Ferneau, Jo  
Page 3 of 4

9/26.01, 26.03 cont.	the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.
10/37.01	4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.
11/39.01	5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.
12/35.01	6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.
13/04.01	I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the

Ferneau, Jo  
Page 4 of 4

13/04.01 cont.	environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.
14/07.01	Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.
	Sincerely,
	jo ferneau

**Fischer, Bernice**  
Page 1 of 1

Thomas Grim, Document Manager  
US Department of Energy/National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

April 25, 2004

Dear Mr. Grim:

1/04.01 We are unalterably opposed to the proposed plan to double the plutonium at the LLNL and to producing plutonium pits for nuclear weapons.

2/23.02 • Aside from the fact that this plan would increase the already evident risk to workers and the public of toxic and radiation disease, it is unconscionable to think that our government is also putting into jeopardy the Non-Proliferation Treaty by continuing to ignore our promise to disarm and work for elimination of all nuclear weapons.

3/01.01 We urge you to convey to our Government our deep concern. The opinion given by the International Word Court that "nuclear weapons are illegal" makes each of us culpable for being in violation and subject to criminal prosecution by world opinion.

Respectfully yours,  
*Bernice Fischer*  
Dr. and Mrs. A. A. Fischer  
948 Altos Oaks Drive  
Los Altos, CA 94024

**Fisher, Helen M.**  
Page 1 of 1

May 26, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL)

Dear Mr. Grim:

1/04.01 I have grave concerns as to why our government believes that our country needs bigger and better bombs and biological weapons when our stockpile of "weapons of mass destruction" is already overwhelming and a threat to all mankind

2/27.01 It makes no sense to revive the Plutonium - Atomic Vapor Laser Isotope Separation project (AVLIS), cancelled ten years ago because it was dangerous and unnecessary. Renaming it the "Integrated Technology Project" (ITP) and the "Advanced Materials Program" (AMP) does not change that fact. It isn't logical to revive a project that has the potential to turn into a nuclear proliferation nightmare on a world-wide scale as other countries do the same in order to *keep-up-with-us* in nuclear capability, especially now that the Bush Administration has set a precedent for preemptive war.

3/24.02 Also of grave concern is that the Lawrence Livermore National Laboratory has caused enough environmental damage to be listed as a Superfund cleanup site, a situation that will only increase with the experiments planned with this program. LLNL has had its share of security problems in the past, for example, failing to change locks after losing track of keys, and failing to adequately secure gates and buildings, an open-door policy that is not acceptable.

4/30.02

5/01.01 The United States of America should be a leader among nations in finding ways to prevent war and the buildup of "weapons of mass destruction," rather than a leader in increasing both.

Yours truly,  
Helen M. Fisher  
*Helen M. Fisher*  
2714 NW Pickett CT  
Bend, OR 97701  
Hfisher41@aol.com

FitzmaurIEL, Anne  
Page 1 of 1

Forrest, Elizabeth  
Page 1 of 1

April 25, 2004

Dear Mr. Grim:

I strongly oppose DOE's Site-wide Environmental Impact Statement for Livermore Lab for the next ten years.

The amount of plutonium allowed must be decreased, not increased. In addition, new technologies threaten those of us living in the Bay Area. And underground testing must not be resumed.

Sincerely,  
Anne FitzmaurIEL

1/04.01



**Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration**



**NNSA**  
National Nuclear Security Administration

**Written Comment Form**  
Must be received on or before May 27, 2004

Dear them if may concern,

1/33.01 I don't think you should triple the amount of plutonium. You shouldn't because if you do, what if there is a spill or an explosion. If it is a spill, what if you can't

2/25.05 lock up quick enough and if it is an explosion, many people will die. We should not even make so many nuclear bombs. We should not use them because we

3/32.02 want to. We can only use them to defend ourselves, but we shouldn't do that either. I don't want to have nuclear bombs, and that is that.

Sincerely,  
Elizabeth (9 years  
-orrest old)  
1028 Atherton Drive  
Tracy, CA  
95304  
833-9171

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

**Fountain, Aimee**  
**Page 1 of 1**

**Fouts, Vickie**  
**Page 1 of 4**

Dear Mr. Grim:

I just wanted to take this opportunity to weigh in on the proposed expansion of nuclear work at the Lawrence Livermore National Lab. As a longtime resident of the bay area, I would be ashamed to have it be a site of renewing the policy of (unnecessary) live nuclear testing, a policy rightly abandoned in 1992. Besides it being a policy matter, the health risks of nuclear development in Berkeley are too great in such a location, due to the dense urban population as well as the situation of the lab between 2 earthquake fault lines. I oppose the DOE's proposed expansion of nuclear development. Thank you for your consideration.

Best,  
 Aimee Fountain

1/04.01

Dear Mr. Grim:

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

The nearly 200 members of the Fresno, CA Branch of the Women's International League for Peace and Freedom (WILPF) wish to express our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.
2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

1/31.04

2/08.02

Fouts, Vickie  
Page 2 of 4

3/34.01 4/33.01, 25.01	3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.
5/27.01	4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP/AMP are a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.
6/37.01	5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.
7/26.01 8/26.03	6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.
9/26.04	7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that

Fouts, Vickie  
Page 3 of 4

9/26.04 cont.	target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF mega laser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.
10/39.01	8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.
11/35.01	9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.
12/14.01	10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.
13/22.01	11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.
14/20.05	12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.
15/01.01	13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding

**Fouts, Vickie****Page 4 of 4**

15/01.01 CONT. | legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).

16/07.01 | Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.

17/02.01 | The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched Uranium) from the LLNL site.

17/02.01 | Please do all you can to address the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL). We would like to see the end of all nuclear weapons worldwide, but since that will not happen in the near future we ask that you do all you can to not allow the development of a whole new generation of nuclear bombs at LLNL and to find the best possible ways to deal with the waste already there.

In Peace,

Vickie Fouts  
WILPF Branch President  
PO Box 5114  
Fresno, CA 93755

cc: Senator Box, Senator Feinstein

Since 1915, WILPF has worked to achieve through peaceful means: world disarmament, full rights for women, racial and economic justice, an end to all forms of violence, and to establish those political, social, and psychological conditions which can assure peace, freedom, and justice for all.

Garrison, Richard  
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Gass, Michael  
Page 1 of 1

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

From: Richard Garrison [mailto:rdgarr@emory.edu]  
Sent: Monday, May 31, 2004 7:28 AM  
To: Mr. Tom Grim  
Subject: new programs being proposed at Livermore Lab

Richard Garrison  
1150 Rankin Steet  
Stone Mountain, GA 30322

May 31, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/04.01

I think that it is vital for the U.S. and the world that we maintain our military and technological advantages.

I support the research and development initiatives for the LLNL. I urge you to move forward quickly, yet carefully.

Do not be swayed by those who do not take into account the larger picture.

Thanks

Sincerely,

Richard Garrison

Dear Mr. Grim,

I am writing because of my ongoing concern about the projects which are designed to lead up to production of nuclear weapons. I have recently learned of the plutoniumatomic vapor laser isotope separation project.

1/04.01

Our health and that of the environment continues to be put at risk due to this research. Not only are there dangers from release of radioactive materials but the proximity of the research facilities to those that work with deadly microbiological puts us at risk of infectious epidemics.

As the experience in Iraq so clearly illustrates, nuclear weaponry is truly outdated.

Sincerely yours,

Michael Gass  
2760 Ganges Pl  
Davis, CA 95616

Gilbert, Carol  
Page 1 of 1

Gould, Jeff  
Page 1 of 2

May 14, 2004

Dear Mr. Brown,

I plead with you to envision a world of right relationships in which all creation is seen as sacred and interconnected. We are at a critical time in history when humanity is being asked to choose its future.

1/04.01 | My future includes nothing in this  
| 500 Year Plan for Livermore.

2/01.01 | The proposal violates international laws  
| and treaties which the United States has  
| signed.

3/32.04 | I am a Roman Catholic sister presently  
| incarcerated for disrespect, opposing and  
| symbolically dressing a WMD - a Menuteman III  
| in Colorado.

Please know that I will not be  
compliant with the ten year plan. I will  
continue to resist these horrendous &  
illegal plans for Livermore  
Our God must be weeping!

Carol Gilbert, OP  
# 10856-039 R-1  
Federal Prison Camp  
P.O. Box 2  
Alderson Wd 24910

4/27/2004 - Livermore, Ca.

**Before DOE public hearings on new nukes @ LLNL:**

1/02.01 | First, let me thank the DOE for this opportunity to provide  
| input on the proposed future projects at LLNL - which I believe  
| follow a path that is **inappropriate** for our civilization, the 50  
| mile radius environmental impact area and the planet as a whole!  
| Today is a day like no other in history as I and many others  
| **MUST stand** and object to new weapons - prototyping, test  
| preparations, planning and design at LLNL.

At an early stage in my life the idea of submitting others to the  
wrath of a nuclear weapon turned me against the so-called  
deterrence of the cold war era. Can one honestly claim that nuclear  
weapons are a rational means of providing "security" from  
violence, and that their use in the biosphere can be "limited"? The  
fact that we, (at the end of WWII) as a nation, were capable of  
such barbarism, such an instant "final solution" of our own, sent  
the waves of proliferation to the shores of many nations.

Today, ignoring recent **"strategic"** planning which gives  
legitimacy to the use of a nuclear first strike leaves humanity  
again poised to: "Become death, the destroyer of worlds".

Some may think this "destroyer" image must be our fate: we  
are here to shatter such shallow vision among individuals, tribes,  
nations and the world. We are here as an expression of trust,  
honest communication and most importantly an understanding  
that we all continue to depend on each other, **we are all  
connected!**

Quoting - Dwight D. Eisenhower :

"Every gun that is made, every warship launched, every rocket  
fired signifies in the final sense, a theft from those who hunger  
and are not fed, those who are cold and are not clothed. This  
world in arms is not spending money alone. It is spending the  
sweat of its laborers, the genius of its scientists, **the hopes of its  
children**. This is not a way of life at all in any true sense. Under  
the clouds of war, it is humanity hanging on a cross of iron."

Fairness and human life are not valued more than commerce in  
smart bombs, military prowess or man's delusional path toward  
armageddon.

Gould, Jeff  
Page 2 of 2

Graf, Daniel  
Page 1 of 3

**Fundamental questions**, specific to the employment of nuclear and biological weapons technology in our civilization must be honestly and openly addressed if we are to have a chance of ensuring a healthy future for the seventh generation yet unborn.

Neither self-hate nor self-congratulation shall give meaning to the horizon: with civility and shared humanity **we MUST stand!**

In conclusion, with respect and sincerity my message to those "doing a job" drafting the Nuclear Posture Review and implementing it's odious goals. I quote the great American poet - Alan Ginsberg :

- !!!Go f\*\*\* yourself with your atom bomb!!! -

*Comments by -*

*- Jeff Gould  
616 Buena Vista Av  
Alameda, Ca. 94501*

Thomas Grim  
Livermore Site Manager Document Officer  
NNSA  
7000 East Avenue  
MS L-293  
Livermore, California 94550-9234

cc: Representatives Ellen Taucher, Anna Eshoo, Tom Lantos, and Nancy Pelosi, Senators Diane Feinstein and Barbara Boxer

Wednesday, May 05, 2004

To Mr. Grim,

Thank you for taking comments from the community on the Site-Wide Environmental Impact Statement (SWEIS) for Lawrence Livermore National Laboratory (LLNL). In this letter, I have included my general comments on the plan and have outlined what I believe are gaps in the environmental impact statement.

1/04.01 I will say outright that I am opposed to any program that makes any kind of nuclear weapons "more usable". I've never met anyone from any part of the political spectrum who told me that we needed more weapons on the planet, particularly such destructive weapons. That being said, there are numerous, and what I believe to be substantial, gaps in the environmental analysis. These call into question not only the proposed action, but as well the wisdom of continuing even current levels of weapons research, the "No Action Alternative".

2/01.01 While possibly outside the scope of the SWEIS, it is not mentioned whether expansion of the LLNL would adhere to the Nuclear Non-Proliferation Treaty or the Biological Weapons Convention. In an effort to prevent proliferation of nuclear and biological weapons, this nation has a responsibility to set an example for other nations. Expanding LLNL will do just the opposite, and would likely violate both treaties.

3/01.02

However, more to the point of the SWEIS plan, which lacks important specifics and does have gaps. I would like to elaborate upon these further.

4/23.02 A. Worker Safety  
Exposures resulting from handling accidents were estimated by LLNL to increase the risk of Latent Cancer Deaths by 300% to 500%. This is an unacceptably high figure.

5/23.02 B. Risk Analysis from Aggregate Exposure  
There is growing body of scientific evidence that aggregate or accumulated risks should be accounted for in both workers and for the local population to determine real threat levels for cancers and other disease. These risks are not mentioned in the SWEIS. This suggests a significant gap exists in the threat analysis. Other biological

Graf, Daniel  
Page 2 of 3

Graf, Daniel  
Page 3 of 3

5/23.02 cont.	and chemical hazards exist on and near the facility, so an aggregate cancer study is especially needed.
6/14.01, 14.03	<p>C. Earthquake Hazards LLNL has indicated that 108 buildings are in need of seismic upgrades. Would these upgrades be completed in time for the proposed expansion? It is well known that there are numerous faults in the area. Even a moderate earthquake could cause a chemical or nuclear accident of varying degrees. There are two faults within 1 km of the lab, one of which produced a moderate earthquake in the last 25 years. Known major earthquake faults, capable of producing catastrophic earthquakes, are within 60 miles of the facility. It is well established that there are <i>unknown</i> faults capable of major earthquakes. The Northridge Earthquake in 1994 occurred on an unknown fault. It makes no sense to expand a facility in a highly seismic area, with a rapidly-growing population. Clearly, new geological research is needed to address these very real, complicated, and unpredictable seismic risks.</p>
7/17.01, 18.01	<p>D. Proximity to Growing Population Center Both air and water would be adversely affected by an expansion of LLNL operations. The SWEIS indicates such. Livermore is a populated suburb now, unlike when first constructed. There is considerable community debate as to whether it is appropriate to be handling even the current administrative limits of hazardous material so close to a populated area. The proposed plan is to roughly double the limits for plutonium at LLNL, at a time when if anything, plutonium should be phased out at the lab. Plutonium is very difficult to store safely.</p>
8/33.01	<p>Nor should tritium targets be manufactured in a populated area. Tritiated water is a common chemical state of tritium, which makes it easier for it to bind to living cells. Tritiated water, even in low doses, has been shown to cause brain damage and behavioral damage, and to cause shrinkage of testes and ovaries of the unborn. Moreover, tritium escapes easily. So it is unreasonable to propose to expand the use of tritium at the facility, particularly in a populated area.</p>
9/34.01	<p>Risk analysis figures available from LLNL are not convincing. Further disclosure and discussion of the airborne and water-borne radiological risks are needed before the community can be confident that all the dangers have been adequately addressed. In the event that the expansion occurs, it would be difficult to roll back due to costs and other commitments. However, population pressures make having a facility like this less and less safe for this area. It would seem in 20 if not in 10 years, the dangers would become unmanageable due to population growth alone.</p>
10/23.01	<p>E. Potential for Traffic Accidents The degree of vehicle traffic in the Livermore area presents yet another problem for any expansion plan, or even for the No Action Alternative mentioned in the draft. Far more study is needed to evaluate what the potential hazards are, and how many people would be threatened in an accident involving transport on public or on private</p>
11/25.10	

11/25.10 cont.	roads. The community needs to better understand the airborne radiological threat to traffic, housing, schools, and local businesses.
12/25.06	<p>F. Other Intangible Accidents Even with proper planning, accidents of various types, scales, and severity will occur. Some of these accidents may occur due to forces outside of LLNL's control. For example, accidents could result from faulty parts purchased from an outside supplier. Accidents may occur with equipment that is not properly modeled or perceived to be outside the scope of a project. Further discussion and up-to-date studies are needed to assess the extent of these risks to the outside, particularly if the facility is going to be expanded.</p> <p>While good engineering has to date prevented many potential accidents, how humans behave in an accident scenario is unpredictable. Moreover, failure in a component not related to manufacture or testing, say a failure in the air conditioning just as an example, may cause failures to downstream systems. It would seem quite difficult to account for all possible scenarios in testing, even if planning and design are as good as we could expect.</p>
13/15.01	<p>G. Economic Consequences In the event of a nuclear accident, in addition to loss of life and casualties, California and especially the Bay Area economy could suffer immensely. The Proposed Action is a poor investment of resource because as population pressures increase, environmental risks, dangers, and consequences will be raised repeatedly even absent of an accident. A rollback might become necessary and/or required in the future, so why invest the time and dollars now?</p>
14/04.01	<p>Considering all these factors, and some heretofore unmentioned problem areas such as the threat to wildlife along with difficulties with the storage of nuclear waste and other hazardous materials, the proposed expansion of LLNL, as described in SWEIS, should be rejected. Thank you for taking the time and effort to address these concerns.</p>
	<p>Best Regards,  Daniel Graf 1307 S Mary Ave, #205 Sunnyvale, CA 94087</p>

Graham, Kellie  
Page 1 of 2

To Mr Tom Grim, DOE

20 May 2004

Dear Mr Grim:

1/04.01 | I am shocked at plans to increase nuclear-weapons activities and double the amount of plutonium at Livermore National Laboratory. I urge you to cancel those plans, and the following are some critical reasons for this.

2/27.01, | One of these plans was cancelled over ten years ago, on the grounds of being  
33.01 | dangerous and unnecessary. This is the Plutonium Atomic Vapor Laser Isotope Separation. This would require a 3-fold increase in the amount of plutonium used in a single room-which would pose grave dangers to public health, and cause serious risks of nuclear nonproliferation in the event some plutonium was stolen.

3/37.01 | Another plan involves testing new technologies to manufacture plutonium pits for nuclear weapons. This-jointly with the Modern Pit Facility--would make possible the production of 150-450 bomb cores annually, which is about the double the combined nuclear arsenals of France and China. This program would gravely destabilize and already-hazardous world.

4/26.01, | As a result of these plans, plutonium, highly-enriched uranium and lithium hydride  
26.03 | would be added to experiments in the National Ignition Facility (NIF) when the latter is completed at Livermore. That will in turn increase the possibility of using the NIF to develop nuclear weapons, and create additional public-health risks for workers at Livermore.

5/23.01, | Under the plans, the amount of tritium in test targets will rise tenfold. Here again  
34.01 | there is a serious radiation danger for Livermore workers-particularly given that Livermore has a history of tritium spills, releases and accidents.

6/39.01 | The plans call for Livermore to develop diagnostics to "enhance" the readiness of the US to conduct full-scale underground nuclear tests. This will lead the world back to the dangerous days of unrestrained nuclear testing.

7/01.02 | The plans provide for an advanced bio-warfare agent facility located at the same area at Livermore as the nuclear-weapons work. This could weaken the international treaty against biological weapons. In addition, at a time of public concern about bioterrorism, the plan could cause the equivalent of a bioterror attack in the event that harmful organisms got out of Livermore. Such an event would threaten not only Livermore workers and residents but millions of people in the nearby Bay Area.

1/04.01 | In short, the new plans for Livermore cause very serious problems for public  
cont.

Graham, Kellie  
Page 2 of 2

1/04.01 | health. Further, they make our country LESS safe by aggravating the risk of  
cont. | nuclear proliferation, and by contributing to the development, testing and deployment of highly-provocative weapons.

Sincerely yours,

Kellie Graham

**Grandparents for Peace of Rossmoor,  
Robert Hansen  
Page 1 of 1**

I am here representing Grandparents For Peace of Rossmoor. My name is Robert Hansen.

1/32.02 We believe that nuclear weapons remain the greatest threat to civilization's survival.  
There is NO scenario where the use of nuclear weapons makes sense. Instead of devising new bombs, our country should be leading the way toward elimination Of this blight on mankind.

2/07.01 The department of Energy could and should be leading the way toward energy independence through perfecting solar and wind power, since everyone knows that fossil fuels will one day run out....not continuing to perfect a class of weapons, the use of which should be too horrible for a sane person to contemplate.

President Bush entertained the idea of dropping a nuclear bomb on Iraq. Rumsfeld stated "We know where the WMD are stored"...suppose we had dropped one on that site where we "knew" they were. We think we're in a mess now. You can't fight terrorism with nuclear arms.

3/02.01 The labs could serve mankind well by dismantling nukes and devising ways to guard the plutonium and other fissionable materials which could too easily fall into the hands of terrorists. Especially the materials to be found in the former Soviet Union.  
The time for converting the labs from war factories to instruments for peace is NOW.

**Gray Panthers of Marin, Louise Aldrich, Co-Convenor  
Page 1 of 1**

**GRAY PANTHERS OF MARIN  
P.O. BOX 2874  
SAN RAFAEL, CA 94912  
APRIL 17, 2004**

Mr. Thomas Grim  
Livermore Site Office Document Manager, NNSA  
7000 East Avenue, MS L-293  
Livermore, CA 94550-9234

Dear Mr. Grim,

We, the Gray Panthers of Marin, are very concerned over the plans you are working on for Lawrence Livermore Lab.

1/33.01 1. We strongly object to doubling the limit for PLUTONIUM to 3,300 lbs. This can make more than 300 Nuclear Bombs!

2/27.01 2. We strongly object to the revival of Plutonium atomic vapor laser isotope separation, and especially the 3 fold increase of plutonium that can be used in a single room.

3/37.01 3. We strongly object to testing for Producing PLUTONIUM PITS for Nuclear Weapons and for the possible production of 900 bomb cores per year.

4/26.01 4. We strongly object to adding plutonium, highly-enriched uranium and lithium hydride to experiments in the NATIONAL IGNITION FACILITY megalaser. We are against this facility altogether.

5/26.04, 34.01 5. We strongly object to the manufacture of TRITIUM targets for the NIF megalaser on site at Livermore Lab. This will increase the amount of tritium there from 3 to 30 grams.

6/39.01 6. We strongly object to the development of diagnostics to enhance the nations's readiness to conduct underground NUCLEAR TESTS.

7/35.01 7. We strongly object to the plan for a BIO-WARFARE AGENT FACILITY. The lab proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens.

8/02.01 8. We strongly object for your plans to produce WEAPONS OF MASS DESTRUCTION at Livermore!

Sincerely,  
  
Louise Aldrich, co-convenor.



April 27, 2004

Mr. Thomas Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234  
Phone (925) 422-0704

RE: Draft LLNL SW/SPEIS Comments

Dear Mr. Grim:

GreenLaw is a student-run organization at the University of Washington School of Law that focuses on environmental outreach, education, and advocacy. This letter is to serve as our public comment on the Draft Site Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (DOE/EIS-0348, DOE/EIS-0236-S3) ("SW/SPEIS").

The purpose of every environmental impact statement is to provide information to government officials and the public as to the possible adverse effects of proposed actions, so that the agency can make informed decisions. The National Environmental Policy Act ("NEPA") refers to this as giving environmental values "appropriate consideration in decision making" 42 U.S.C. § 4332, Sec. 102(B). The Council on Environmental Quality ("CEQ") reflects the same sentiment by stating: "NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken." 40 C.F.R. 1500.1(b). The Department of Energy ("DOE") affirms its commitment to these ideas, stating: "It is DOE's policy to follow the letter and spirit of NEPA; comply fully with the CEQ

Regulations..." 10 CFR 1021.101. Despite this assertion, the SW/SPEIS lives up to neither the letter nor the spirit of NEPA and the CEQ guidelines. In form and content, this document fails to provide adequate understanding of the environmental impacts and available alternatives of the proposed actions at the Lawrence Livermore National Laboratory ("LLNL") (including Site 300). Ultimately, this EIS does not support informed agency decision making, validating instead existing DOE decisions.

Our comments and concerns about the SW/SPEIS are broken down into the following eight categories: The National Ignition Facility; Integrated Technology Project; Higher Material Allowances; Waste Stream; Decommissioning and Decontamination, Building Upgrades, & New Construction; Security Risks; International Treaties; and Alternatives Analysis. Each section deals with some of the problems, concerns, questions, and inadequacies related to that portion of the SW/SPEIS.

In addition to these particular concerns, we found general inadequacies in the document's analysis and description of impacts of the SW/SPEIS, including:

- 2/31.06, 31.02 □ Use of imprecise and undefined language (e.g., "minimal impacts," "no significant impacts" and "adverse");
- 3/22.02 □ A tendency to segment impacts into discrete categories rather than considering synergistic effects;
- 3/22.02 □ Failure to consider the impacts that waste production will inevitably have at off-site disposal locations and on transportation routes;
- 2/31.06, 31.02 □ Consideration of impacts on a mere ten-year scale rather than a long term basis that realistically encompasses the environmental impact of proposed decisions;
- 31.02 □ Consistent references to documents, such as previous EISs, that are not readily available.

Ultimately, the EIS leaves us without an adequate understanding of the magnitude, duration, and extent of the effects of the proposed actions at LLNL.

The following are some of our specific concerns:

□

1/31.04

2/31.06, 31.02 cont.

**I. THE NATIONAL IGNITION FACILITY**

NRDC v. Pena and the requirements of NEPA

The Department of Energy attempts to satisfy the court's order in *NRDC v. Pena* by including a Supplemental Stockpile and Stewardship Management Programmatic Environmental Impact Statement pertaining to the National Ignition Facility ("NIF") in the Lawrence Livermore National Laboratory (LLNL) Site-Wide Environmental Impact Statement (jointly referred to as "SW/SPEIS"). The DOE claims that this will ensure the timely analysis of the proposed use of new materials at the NIF within the environmental impacts being evaluated for the overall continued operation of the LLNL.

DOE's attempt to analyze the environmental impacts of the use of new materials at the NIF in the course of a SW/SPEIS, rather than in a court-ordered Supplemental Programmatic EIS, undermines the court's intent in *Pena*. By relying on a SW/SPEIS, the DOE ignores the procedural considerations of synergistic and cumulative effects, scope of alternatives, and tiering under NEPA.

**A. Synergistic and Cumulative Effects**

Due to the cumulative and synergistic effects that use of these new materials will have within the Stockpile Stewardship and Management Program, and the material differences in objective between a Site-Wide EIS and a Programmatic EIS, only analysis on a program level is sufficient here. See *Izaak Walton League of America v Marsh*, 655 F.2d 346 (D.C. Cir., 1981) citing *Kleppe v Sierra Club*, 427 U.S. 390, 410 n.20 (1976.) ("A comprehensive impact statement may be necessary in some cases for an agency to meet this duty. Thus, when several proposals for coal-related actions that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together. Only through comprehensive consideration of pending proposals can the

4/26.02

5/31.06  
07.02

agency evaluate different courses of action.") In section M.3.2.i, DOE exemplifies these wide-reaching effects when it indicates that after a plutonium experiment, disassembled containment vessels will be sent to the Nevada Test Site. DOE goes on to demonstrate a lack of program wide analysis when it fails to address cumulative effects of this waste at the Nevada Test Site.

5/31.06  
07.02  
cont.

In Section M.3.2.2, the SW/SPEIS also says that materials (depleted uranium, highly enriched uranium, thorium-232, weapons-grade plutonium, tritium) will come from the LLNL tritium facility or the Los Alamos National Laboratory in New Mexico. DOE fails to describe how and by what route these materials will be transported.

In Section M.5.2.11 DOE indicates that the exposure from transport by trucks is negligible. However, they fail to address effects of siting in traffic next to one of these trucks for an extended period of time (which some sources say might deliver the equivalent of one x-ray worth of radiation). More glaringly, the DOE omits discussion of any reasonably foreseeable consequences from accidents. Nuclear materials trucks are as susceptible to mechanical defects as any other vehicles, as an incident in Bremerton, Washington demonstrated two years ago. See Appendix I, Larry Lange, *Nuclear materials truck disabled on highway*, Seattle Post-Intelligencer (2002). Transport via major highways and through large cities also creates a likelihood of multi-vehicle accidents. The DOE should address these reasonably foreseeable impacts.

6/20.01  
26.04

Lastly, in Section M.3.1.6, the SW/SPEIS examines the decommissioning and decontamination of the NIF which is expected to generate a total of 263 cubic meters of low level waste and 226 cubic meters of hazardous waste. DOE does not clarify the proposed processes for use or disposal of the waste.

7/22.02

**B. Scope of Alternatives**

Analysis of "alternatives including the proposed action" is "at the heart of an environmental impact statement," and requires that agencies reasonably explore and objectively evaluate all reasonable alternatives. 40 CFR 1502.14 (1978). The lack of synergistic and programmatic

8/31.01

8/31.01 cont.	analyses of these new materials stems in part from an inadequate scope of alternatives. DOE abused its discretion in providing such a limited scope of alternatives. The SW/SPEIS only examines three potential alternatives (no action, proposed action, and reduced operation), and does not indicate the preferred alternative as required by CEQ regulations. This limited examination of alternatives does not meet the NEPA requirement to reasonably explore and objectively evaluate all reasonable alternatives. Furthermore, despite DOE's assertion to the contrary, an alternative proposing the cessation of operations at the NIF would not be unreasonable because the purpose and need is not justified.
9/31.01	
10/26.01	
11/26.01	DOE states that the purpose of the NIF is to support the need to dismantle weapons and maintain smaller stockpiles and to prevent the spread and use of nuclear weapons worldwide. However, the reported experimental capabilities of the NIF, especially with these new materials, exceed the scope of the purpose and need without justification. The SW/SPEIS discusses the use of the NIF, but fails to adequately examine the urgency or the need for the experiments. More information must be provided to justify the need for reaching ignition and thermonuclear burn.
12/31.05	<p style="text-align: center;"><b>C. Tiering</b></p> <p>Although agencies may incorporate certain materials by reference, they may not "tier" their Site-Wide EIS to a broader management program where program itself has not been subject to NEPA procedures, even if this will result in a less bulky Environmental Impact Statement (EIS). <u>42 U.S.C.A. § 4321 et seq.</u>; <u>40 C.F.R. §§ 1502.20-1502.21</u>. <i>Northcoast Environmental Center v. Glickman</i>, 136 F.3d. 660 (9<sup>th</sup> Cir. 1998). DOE is attempting to tier impact statements in a manner that is inconsistent with the informed agency decision process that is at the heart of NEPA. In order to make an informed program-level decision, DOE should do more than proceed immediately to analysis of impacts at the site-wide level. It should analyze program-level impacts affected by use of off-site raw materials, generation of waste streams, and transportation to and from LLNL. By analyzing the impacts of new materials at a site-wide level, DOE relies improperly on an existing program decision that was made without information about the use of these particular materials.</p>

13/27.01	<p style="text-align: center;"><b>II. INTEGRATED TECHNOLOGY PROJECT (AVLIS) &amp; PETAWATT LASER</b></p> <p>We are satisfied to see that some of the information regarding the Atomic Vapor Laser Isotope Separation ("AVLIS") and/or Integrated Technology Project ("ITP") has not been classified. However, we have several concerns related to the ITP as described in Appendix N. In general, the analysis is inaccessible to the average reader and fails to provide an understandable comparison of the long-term health and safety risks associated with the ITP.</p> <p><u>Programmatic EIS for ITP</u></p> <p>The ITP was not considered in an Environmental Assessment, and is proposed for the first time in this SWEIS. The ITP will involve many different DOE sites and will pose programmatic risks in terms of feed materials - containers - transportation routes, waste streams and ultimate disposition. The SWEIS should provide an evaluation of real alternatives to the ITP that addresses whether the LLNL is an appropriate location for the project and considers alternatives beyond the limited scope of the proposed action, no action, and reduced action alternatives.</p>
14/25.01, 27.02, 33.01	<p><u>Plutonium Increase</u></p> <p>Section 3.3.4 of the SW/SPEIS indicates that the plutonium increase would be from 20 kilograms in any room to 60 kilograms in each of two rooms. However, the SW/SPEIS states that environmental evaluations were performed with 60 kilograms of Material at Risk (MAR) rather than the potential 120 kilograms of MAR as indicated in section 3.3.4. The SW/SPEIS needs to address why the evaluations were based on 60 kilograms of MAR.</p>
15/23.02, 33.01	<p><u>Health and Human Safety</u></p> <p>Section 3.6.9 notes that the proposed action for ITP is the source of the largest single increase in health and human safety concerns at LLNL. However, there is insufficient justification for this increase. Further, if the environmental calculations were made with 100 to 120 kilograms of MAR as outlined in the EIS estimate, this increase in health and human safety risks would likely</p>

15/23.02, 33.01 cont.

be even higher. Inaccurate calculation of risk on the most likely source of increased danger to health and human safety is wholly inadequate for assessment of the true potential for harm from this proposed action. We are left wondering: what the true risk to workers and the general population will be. The draft SWEIS should be re-issued with appropriate calculations of risk, in prose, where risks are not provided in exponential format but are spelled out in a more accessible way such as "one in a million" cancer outcome. Only then could the affected communities adequately evaluate this document.

Traffic and Transportation

16/27.03

Appendix N provides transportation alternatives for the Isotope Separation Step (ISS) of either recycled or un-recycled plutonium byproduct. The two proposed methods entail different destinations (LANL for recycled byproduct and WIPP for non-recycled) and different carriers (9975 containers for recycled and TRUPACT II containers for non-recycled by product). The difference seems to lie in the volatility of the byproducts: non-recycled plutonium byproduct results in transuranic waste (TRU) whereas recycled byproduct does not, and is therefore characterized as low level waste (LLW). Appendix N mentions neither a cost/benefit analysis of the alternatives nor the likelihood that one method will be implemented over another. These issues need to be addressed. Given that there is a greater likelihood that TRU rather than LLW will be transported, this is a material consideration that must be better analyzed and addressed in the consideration of the proposed action scenario. For example, while Appendix N describes the radiation omitted by the carriers as "immeasurably small," Section 5.1.11 provides for a higher dose rate for TRU waste (four as opposed to one millirem per hour). Furthermore, table N.5.2.5-2 assumes a dose rate of 1 mrem/hr, rather than a TRU dose rate of 4 mrem/hr, in its analysis of the collective dose. The SW/SPEIS needs to provide a justification for the assumed rate and all assumptions made in its calculations.

Petawatt Laser

17/04.03

The brief description of the procedure and purpose of the Petawatt Laser Project (PLP) in Section 3.3.11 is not sufficient to inform the public of its possible impacts or benefits. The

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17/04.03 cont.

reader should be able to read the SW/SPEIS and gain a working knowledge of what the PLP is designed to accomplish. Section 5.1.8 regarding air quality suggests that the various proposed laser projects impact air quality. The SW/SPEIS needs to address the impact that stripping electrons from atoms in the Petawatt facility will have on the air quality and radiation. In addition, the effect on workers in the PLP should be included in the evaluation.

III. HIGHER MATERIAL ALLOWANCES

Site 300

18/33.01, 17.01

Section 5.3.5 states that "there are no planned projects near the Livermore Site and Site 300 that, in combination with LLNL activities, would have an adverse effect on existing view sheds or the surrounding environment." Though no new projects may be planned, the SW/SPEIS must also consider all possible needs for accommodating and storing higher material allowances for plutonium, tritium and highly enriched uranium. Analysis regarding future storage needs, or other consequences of planned projects, and the related implication of Site 300, should be included in the SW/SPEIS.

Geology and Soils

19/14.02

The SW/SPEIS is internally inconsistent with regard to the Antiquities Act and the handling of any fossils found during new construction. Section 5.3.6.2 includes the following policy for Livermore buildings: "Should any buried fossil materials be encountered, LLNL would evaluate the materials and proceed with recovery in accordance with requirements of the *Antiquities Act*." However, the Antiquities Act is not mentioned in reference to construction at Site 300. The SW/SPEIS states: "Under the Proposed Action, there would be no impacts to any known fossil deposits. There would be no impacts to any known or exploitable mineral resources or unique geologic features." DOE should state the basis for omitting reference to the Antiquities Act in discussion of Site 300 construction.

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Waste Disposal

20/22.02 Section 5.3.13.1 states that "LLNL anticipates hazardous material usage rates to increase over the next 10 years" due largely to full implementation of the NIF, BSL-3, and Integrated Technology Program operations. However, the SW/SPEIS does not clearly state how additional waste resulting from higher material allowances will be disposed of following the 10-year period. The SW/SPEIS also does not address whether material usage rates are expected to continue increasing after the 10-year period.

Section 5.3.13.1 notes that LLNL's current waste storage capacity can accommodate increased waste from higher usage rates for the next 10 years. The SW/SPEIS should describe plans for storing additional waste beyond the 10-year period. It should consider, for example, a preliminary injunction against shipments of TRU waste to the Hanford Site, which might complicate interim storage for some LLNL wastes.

Cumulative Impacts

21/24.05 Section 5.3.15.3 states that the Proposed Action and No Action Alternative "present substantially the same opportunities for future contamination..." Yet, the Proposed Action includes higher material allowances for plutonium, tritium, and uranium. Given the greater presence of these materials and expected increases in usage rates, the SW/SPEIS should explain its assertion that there is no significant difference between the proposed action and no action, when greater opportunities for future contamination, during internal transport, manipulation, and storage, seem logical under the former. How does DOE justify their assertion?

**IV. WASTE STREAM**

No Disposal Solution: Bad Policy?

22/33.01 Section 1.5.2 the SW/SPEIS states that "...no pathway for LLNL to dispose of excess plutonium currently exists." Yet LLNL seeks an increase in the administrative limits for fuel-grade

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22/33.01 plutonium by more than 100%. Increased health and safety risks, as well as an increase in the potential for contamination, make higher administrative limits an unjustifiable measure. The SW/SPEIS should address how it is reasonable to allow for the increased production and storage of extremely dangerous substances for which there is no disposal method.

cont.

Increased Chemical Use and Resulting Waste Stream

23/22.03 In 2002, average quantity of lithium hydride, gasoline and various other chemicals used at the LLNL met the maximum permitted level allowed (Table A.4-3, p. A-170). The SW/SPEIS proposed action plan indicates that the on-site levels of some of these chemicals, including lithium hydride, will be increased. Therefore, new permits will be necessary to increase the permitted levels. If the environmental impacts of chemical use, storage, and the resulting waste stream at LLNL have been calculated based on the quantity of chemicals allowed by current permits, then the issuance of proposed permits allowing for increased quantities of hazardous chemicals on site would require revisiting the environmental impacts to reflect the new, increased quantity of chemicals allowed by the new permits. DOE fails to address this issue, instead stating that these permits will be issued in the future and are thus outside the scope of this SW/SPEIS. The issuance of permits increasing the allowable amounts of hazardous chemicals at LLNL necessitates an analysis of the environmental impact of these chemicals based on the new permits.

If, however, actual current chemical use falls below the maximum permitted amount, the SW/SPEIS should identify how much the actual environmental impact will increase with an increase in chemical use. Furthermore, if new and non-routine operations are not considered in the scope of this SW/SPEIS, the document should explain how environmental impacts of proposed increases in waste stream materials will be addressed and accounted for. LLNL should articulate procedures it will use to reduce or maintain current waste stream levels, or if waste stream levels will increase, the NEPA process it will use to address the environmental impacts of such increases.

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	<p><u>Transportation of Waste</u></p> <p>The accident analysis for TRU waste shipments in appendix J relies on the use of TRUPACT-II shipping containers. However, on March 15, 2004, the DOE announced its plans to use TRUPACT-III containers. See Appendix II (DOE News, 3/15/04). The use of these new containers for transporting TRU waste is not considered. The DOE SW/PEIS needs to analyze the accident safety of the TRUPACT-III containers as an alternative in the shipping of TRU waste, so that the public and agency officials can be informed of the possible risks. It makes no sense to base an agency decision on the safety of containers that will not be used.</p>
24/20.05	<p>The SW/PEIS indicates an intention to ship more than 1000 drums of TRU waste. Despite this huge volume, and the extreme toxic nature of the waste, the DOE has made the determination that the WIPP mobile vendor is categorically exempt. See Section 3.2.9. DOE provides no explanation of why this action is categorically exempt, or why it clearly fits within the DOE regulations for categorical exemption. Instead, the document references an internal memo that is not readily available to the public.</p>
25/20.01	<p>According to the SP/SWEIS, the transportation and disposal of waste stream products will largely be handled by commercial contractors. If there is an increase in the transportation of waste to and from off-site facilities (e.g., transportation of waste drums from the Berkeley facility to LLNL; and transportation of radioactive waste from LLNL to WIPP), the SP/SWEIS must address the increased risk of environmental impacts resulting from transport. Incidents involving Berkeley mixed radioactive wastes, shipped to and stored as low level wastes at Hanford, underline the importance of examining reasonably foreseeable environmental impacts, in a complex where mismanagement occurs quite frequently. See Appendix III, Sasha Sajovic, Hyun Lee and Gerald Pollet, <i>Washington Beware: A History of Waste Mismanagement at Nine Department of Energy Low-Level Waste Generators Shipping Waste to Hanford</i> (Heart of America Northwest, 2000) available at <a href="http://www.heartofamericanorthwest.org">www.heartofamericanorthwest.org</a>. Examples of such environmental impacts may be radiation exposure, accidents, spills or terrorist activity en route.</p>
26/20.02	<p>Furthermore, the SP/SWEIS fails to address the impact of choosing commercial contractors to transport and dispose of the waste materials. The SP/SWEIS only addresses accidents involving</p>
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26/20.02 cont.	<p>transport by LLNL vehicles and personnel (page 5.5-16), thus failing to address the large portion of the waste stream transportation and disposal carried out by private contractors and vendors. The SW/SPEIS should address the environmental impact of all transportation and disposal operations, including activity both by LLNL personnel and activity by commercial contractors.</p>
	<p><b>V. DECOMMISSIONING &amp; DECONTAMINATION, BUILDING UPGRADES, NEW CONSTRUCTION</b></p> <p><b>A. Decommissioning and Decontamination (D&amp;D)</b></p>
	<p><u>Comparison of Impacts of Alternatives</u></p> <p>Section 3.6 "Comparison of Impacts of Alternatives" needs to clearly delineate the varying degrees of impact of the decommissioning and decontamination ("D&amp;D") alternatives. There is no evidence of the effects of D&amp;D in Section 3.6, nor do the tables in any way mention D&amp;D other than a discussion of the historic resources. For example, under the Proposed Action there will be a substantially greater amount of D&amp;D activities (820,000 square feet of floorspace under the Proposed Action versus 255,000 square feet under the No Action Alternative). This will clearly result in greater impacts, such as a higher waste generation, which should be addressed. In the current format, it is extremely difficult for a member of the general public to discern from the SW/SPEIS the various impacts of D&amp;D alternatives. If effects or alternatives are listed in another section of this document, then a citation should be included so that the reader can cross-reference.</p>
27/31.06 22.07	<p><u>Historic and Cultural Resources</u></p> <p>A series of inconsistencies concerning potential impacts on historic resources from D&amp;D activities requires further clarification. The first paragraph in Section 5.3.4.2 states, "Impacts to known prehistoric and historic resources at Site 300 would be unlikely to result from the Proposed Action," whereas the second paragraph of Section 5.3.4.2 asserts that the "Proposed Action would have the potential to affect important historic buildings and structures on Site 300</p>
28/11.02	
	12

28/11.02  
cont.

through D&D, rehabilitation, and renovation of existing facilities." Additionally, Table 3.6-1 establishes that there are potential impacts from D&D and renovation. Based on these statements, it is uncertain what potential impacts are being evaluated in this document for Site 300.

29/11.03

The SW/SPEIS may not meet the statutory requirements for taking into account impacts on historic buildings before approval of Federal funds. The *National Historic Preservation Act* requires that agencies, "prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register." 16 U.S.C.S. § 470f (2004). The Programmatic Agreement set out in Appendix G states that no later than the end of February 2005 the National Nuclear Security Administration and University of California will complete their inventory and assessment tasks (Programmatic Agreement, Stipulations, I. a.). If Federal funds are allocated before these assessment tasks are finished, then the DOE will be in violation of 16 U.S.C.S. § 470f. Since this draft EIS relies on a study that is yet to be completed, it does not provide decision-makers and the public with adequate information necessary for decisions and comments. The Draft EIS should be recirculated to include the results of this study so that the public can comment on it.

Non-radiological Air Quality

30/17.03

Section 5.2.8.1 on non-radiological air quality and D&D, falls short of adequate discussion in two areas. First, the SW/SPEIS does not take into consideration the full range of contaminants that D&D activities may involve. For example, discussion focuses on asbestos contamination, but it does not address any of the other contaminants that may exist in the facility as a result of the particular scientific research that is conducted at LLNL. Discussion of the potential air quality effects of D&D from other sorts of contaminants should be incorporated into the SW/SPEIS. Buildings or floorspace marked for D&D may have been the site of unique exposure to contaminants that, although not common to all of the D&D activities, warrant consideration because of the singular problems they may pose.

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30/17.03  
cont.

Second, the section does not address the potential effects on air quality from both the transportation and eventual disposal/storage of contaminated demolished facilities. The potential for adverse air quality effects exists not only at LLNL, but also at any facility to which D&D materials are transported, as well as the regions through which the materials are transported. Such discussion should be incorporated in the SW/SPEIS.

Impacts for Proposed Action – Site Contamination

31/24.05

The general assertion in Section 5.3.15 "Site Contamination" that there will be minimal soil contamination from the proposed activities, and that cleanup efforts will continue to neutralize this problem does not take into consideration the actual adverse effects on the site while it is contaminated should site contamination arise from D&D activities. Although a contamination problem may be dealt with somewhat effectively through cleanup, the site will still have undergone a certain level of contamination for a certain period of time. The effects of such contamination warrant consideration because of the potential impacts on other LLNL activities, both in the short term and long term.

Bounding Accident Scenarios and Offsite Transportation

32/25.09

NEPA requires that an EIS include evaluation of reasonably foreseeable adverse effects on the human environment. The bounding accident scenarios described in the LLNL SW/SPEIS do not address the adverse effects of an accident involving D&D activities. Section 5.5 omits any mention of D&D activities and materials arising out of such activities. An accident involving D&D activities and related materials is arguably just as reasonably foreseeable as the accident scenarios involving chemical, radiological and biological materials discussed in Section 5.5. The foreseeability of an accident is apparent in the large scope of D&D (820,000 square feet). In light of the NEPA requirement of evaluation of such adverse effects, the SW/SPEIS should incorporate discussion of reasonably foreseeable adverse effects of D&D accidents.

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32/25.09  
cont.

Additionally, there is no evidence of the inclusion of D&D materials in Section 5.5.5 regarding "Offsite Transportation Accident Scenarios." That decontaminated, decommissioned, and/or demolished facilities will, in whole or in part, be transported off LLNL and Site 300 necessitates discussion of the potential for offsite transportation accident scenarios involving these materials.

Disposal of Potentially Contaminated Stored or Surplus Materials

33/22.07

Section A.2.4.18 (Deactivation, Decommissioning and Demolition Projects) highlights the possibility of disposal of stored or surplus materials that may be potentially contaminated. DOE needs to further discuss potential steps for storing and disposing of such contaminated materials including, for instance, its plans for proper disposal, and whether disposal will occur on site or off site. Further examples of omissions can be found in A.3.3.7 and A.3.4.3, which discuss the plans to decontaminate and decommission excess facilities at Site 300, but omit any discussion of disposal.

Section B.4.15.2 asserts that while building debris estimates associated with D&D are included in the SW/SPEIS, additional NEPA review may be required in the future depending on the scale and extent of the work involved. However, if the facilities marked for D&D have already been identified, NEPA review should encompass such D&D activities now, at the project proposal stage, rather than when the project has already begun.

**B. Building Upgrades**

Seismic Evaluations

34/14.03,  
14.01

According to Section 4.8.3, the evaluation of seismic hazards for Site 300 was based on a review of literature; an aerial photographic analysis of the faults and landslides prior to field reconnaissance mapping; and a review of features identified in detailed studies of faulting and geology published over ten years ago. For the Livermore site, the LLNL Site Seismic Safety Program recently performed an assessment of the geological hazards, which is the subject of most of the text of Appendix H: Seismicity. The January 18, 2002 Interagency Committee on

34/14.03  
14.01  
cont.

Seismic Safety in Construction ("ICSSC") report requires that evaluation of a specific building for seismic risks in each compliance category—one of which is "geologic site"—be completed by a registered engineering geologist. For Site 300, at least, it appears that the DOE's reliance on secondary sources to evaluate seismic hazards falls below the standard established by the ICSSC report.

If any of the seismic upgrades cited in Section 3.3.18 are scheduled to be completed on buildings at Site 300, the DOE should perform an assessment of the geological hazards similar to what the LLNL Site Seismic Safety Program recently performed for the Livermore Site. At the very least, seismic upgrades scheduled for the Site 300 buildings should be based on primary reconnaissance studies of the building and surrounding area.

In Section 4.8.3, the SW/SPEIS recognizes "moderate to high" potential for ground deformation resulting from landslides at Site 300 but does not explain what specific building seismic upgrades or mitigation plans it may have for the ten buildings that are located on old landslides. DOE should also assess the unique risks of landslides in the Site 300 area relative to potential seismic risks in the areas recognized to have a "moderate to high potential" for ground deformation resulting from landslides.

Seismic Upgrades

Section 3.3.18 "Building Seismic Upgrades" states that 108 buildings have been identified as having potential seismic deficiencies relative to current codes, and that these 108 buildings will be evaluated to ensure compliance with applicable design and construction standards. It is unclear from Section 3.3.18, where these buildings are located (Livermore site or Site 300) or what the "current codes" or "applicable design and construction standards" will be. Appendix H suggests that the standard is "life safety," which is the lowest seismic federal standard. ("...approximately 88 percent of buildings comply with federal seismic 'life-safety' standards and require no further evaluation or mitigation.")

34/14.03, 14.01 cont.

Executive Order 12941, *Seismic Safety of Existing Federally Owned or Leased Buildings*, cited in Section 3.3.18, states that the "minimum level acceptable" standards in Executive Order 12941 will be developed by the Interagency Committee on Seismic Safety in Construction ("ICSSC"). The ICSSC issued standards on January 18, 2002 in a report called "Standards of Seismic Safety for Existing Federally Owned and Leased Buildings." See Appendix IV, *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings*, (Steven A. Cauffman et. al. eds., 2002), available at <http://fire.nist.gov/bfrlpubs/build01/PDF/b01056.pdf>. The Standards report is advisory in nature and establishes the minimum standard ("Life-Safety") for seismic safety of existing federally owned or leased buildings.

The Standards report defines each agency's seismic responsibilities to implement standards for seismic performance levels higher than "Life-Safety" if necessary to carry out its agency mission. For example, the report states that "buildings that must remain fully functional during an earthquake and afterwards ["Operational"] are beyond the scope of the Standards and must be evaluated using appropriate agency specific criteria." The "Operational" standard is the highest seismic federal standard.

The SW/SPEIS should explain whether DOE evaluated the seismic safety of each building in relation to the activities conducted in each building. It should then explain whether the scheduled seismic upgrades were developed taking such activities into account. DOE should disclose any gaps between the minimum seismic standard required by the January 18, 2002 ICSSC report and the building seismic upgrades necessary to prevent harm in the event of an earthquake, especially harm resulting from particular nuclear materials and waste present in any buildings.

The SW/SPEIS should also disclose whether DOE identified any buildings that must be operational during and after an earthquake and whether DOE applied any agency specific criteria pursuant to the January 18, 2002 ICSSC report. If DOE used agency specific criteria to evaluate seismic deficiencies in buildings that must remain operational during and after an earthquake, it should disclose the specific criteria used.

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**C. New Construction: High Explosives Development Center Project & Energetic Materials Processing Center Replacement**

Purpose and Need

35/04.02 The SW/SPEIS does not provide enough information for a reasonable decision because DOE does not explain why existing facilities and equipment are obsolete. Thus, the draft does not establish a reasonable purpose and need for new construction. If the quality of existing facilities and equipment does merit some upgrade, DOE should more clearly delineate the functional difference between shut-down of the activities at Site 300 (which DOE dismisses out of hand) and the reduced action alternative. Again, the SW/SPEIS should outline why DOE requires new construction beyond that already scheduled within the "No Action" alternative, and what additional construction would be proposed under the "Reduced Action" alternative.

Cumulative Effects

36/31.05 The minimal discussion of unavoidable adverse impacts from Site 300 activity is inadequate to compare the combined impacts of the alternatives to the baseline impacts of on-going activity at Site 300. At most, description of baseline as "balance-of-operation" activities allows DOE to act without environmental review on a number of projects: "maintenance", "fire hazard management", safety and health enhancements, asbestos management, custodial services, "reconfiguration of research facilities and offices", "infrastructure projects", and "landscaping". At the very least, DOE has not accounted for the synergistic and cumulative effects of these vaguely-described activities within the draft.

Endangered Species

37/16.03 DOE has not presented the requisite information for reasonable decision-making under NEPA regarding impacts on threatened and endangered plant and animal species. DOE has not delineated all impacts on these species. Instead, DOE will need to conference with the U.S. Fish and Wildlife Service at some point in the future in order to get approval for increased "takes" of

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37/16.03 cont.	<p>endangered species. The SW/SPEIS lists no timeline for when the conference will be completed and does not indicate how study results will be incorporated into the final SW/SPEIS. This does not adequately address impacts of new construction on threatened and endangered species.</p> <p><u>Emergency Services</u></p>
38/29.01	<p>DOE assessment of new construction impacts on emergency services is also lacking. While the SW/SPEIS indicates that emergency personnel are rotated between Livermore and Site 300 to meet minimum staffing levels, the draft does not address the impact of new construction and functionality on the sufficiency of emergency personnel. The SW/SPEIS must assess how staff rotation to meet minimum levels would adequately address and contain full-scale emergencies in this earthquake and fire-prone site in close proximity to a metropolitan area.</p> <p><u>Archeological Conflict of Interest</u></p>
39/11.01	<p>DOE precautions against archaeological disturbance highlight what appears to be a conflict of interest. With the permission of its very own "LLNL archeologists" DOE has determined that it may disturb prehistoric and archaeological resources at Site 300. These resources are eligible for listing on the National Registry of Historic Places. Yet, DOE has not secured the opinions of independent archeologists, or adequately considered the impacts of disturbing these resources. Given the draft SW/SPEIS's indication that new construction will occur under any of the proposed alternatives, the DOE has a responsibility to evaluate these impacts in an unbiased manner, and in light of the unique qualities of these resources. Curiously, DOE appears very willing to secure outside contractors in other situations. The perspective of independent archeologists is necessary here to ensure informed and unbiased decision-making.</p> <p><u>Wetland Mitigation</u></p>
40/16.02	<p>DOE description of wetland mitigation necessitated by new construction is ambiguous. To fully describe new construction impacts on Site 300 wetlands, the SW/SPEIS must indicate whether DOE seeks to re-establish wetland function (e.g., so much water cycled through so often).</p>

40/16.02 cont.	<p>wetland structural components (e.g., presence/absence of certain plant/animal species), or both through mitigation. The draft SW/SPEIS should include comparisons to other DOE wetland mitigation projects to paint a clearer picture of potential "success" of mitigation in light of function/structure goals.</p> <p><b>VI. SECURITY RISKS</b></p>
41/30.01	<p>A series of projects involving dangerous chemical, biological and nuclear components mentioned in the SW/SPEIS have been summarily dismissed as not requiring NEPA review. These projects pose serious threats to the surrounding population and worker safety. Even the reviewed projects fail to take into account safety hazards posed to the surrounding population by the increased risk of terrorist attack on local targets. For example, the DOE looks at the possible impacts of airplane accidents from local airports. However, despite heightened risk of terrorist attacks after September 11, 2001, the DOE fails to address the effects and probability of larger passenger jet airplanes intentionally crashing into the site. DOE provides substantial analysis of the probability of airplane accidents, but offers no analysis about the perhaps greater likelihood of deliberate terrorist attacks.</p>
42/25.08	<p>A series of recent articles cast serious doubt over the security of nuclear labs throughout America. On January 26, 2004, CNN reported that "there was 'compelling' evidence that security tests have been manipulated since the mid-1980s." See Appendix V, Mike Ahlers, <i>Preview Spoils Nuclear Plant Security Test, available at <a href="http://www.cnn.com">www.cnn.com</a></i>. Given that an attack could result in the release of airborne pathogens, causing serious danger in the heavily populated Bay Area, thorough analysis about the attractiveness and vulnerability of LLNL as a terrorist target must be included in any EIS of a nuclear site in a post-September 11 world.</p> <p><u>BSL-3</u></p>
43/30.02, 30.01	<p>The SW/SPEIS does not address safety issues and possible health and environmental impacts of this facility. Working with infectious microorganisms as a "counterterrorism technology"</p>

44/35.01  
cont. creates the possibility of accidental release with devastating consequences. Ironically, while addressing counterterrorism, there is no indication of the possible impacts of acts of terrorism on the facility.

Container Security Testing Facility

45/38.01 DOE also neglected to address any possible impacts of this facility including only vague information about the possible dangers imposed by its creation. In Section 3.2.5 DOE determined that this facility is "categorically excluded from further NEPA review." However, there is no indication DOE has performed any, let alone adequate, NEPA review already. Additionally, the EIS indicates that this facility poses chemical, radiological, and 'other' dangers without addressing the possible impacts on surrounding population, worker health, and the environment. Section 3.2.5 mentions use of 'various actual or simulated threat materials' which terrorists may bring into the country poses serious threats to the surrounding area. The SW/SPEIS should address which materials might likely be used, the impacts of each of these materials, and what precautions are being taken to prevent accident and attack.

International Security Research Facility

46/31.09 With its concentration on computer intelligence, this facility appears innocuous. However, it too should be subject to some NEPA review. At a minimum, this project causes further building in the area and increased traffic. NEPA review is not reserved solely for toxic agents in large scale construction, which a new security facility certainly invokes. The effects of further building and increased traffic should be addressed in the SW/SPEIS.

VII. INTERNATIONAL TREATIES

47/01.01 The SP/SWEIS is deficient in meeting NEPA requirements. The Council on Environmental Quality's *Regulations for Implementing NEPA* Sec. 1502.16 states that an EIS "...shall include discussions of: (c) Possible conflicts between the proposed action and the objectives of Federal,

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regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls...." Section 1.6.1 states "treaty compliance will be considered in preparing a ROD [Record of Decision]." An international treaty, and other international law entered into by the US, constitutes federal law. *The Paquete Habana*, 175 US 677 (1900). It would benefit the public, interested parties, and policy makers in determining the appropriate action alternative to have all information regarding the relation of applicable treaties to these actions, especially in light of the stated purpose in the SW/SPEIS ("continued operation of LLNL is critical to...preventing the spread and use of nuclear weapons worldwide (Section 1.3).").

47/01.01  
cont. DOE has, in the past, set an important precedent by conducting Nonproliferation Impact Reviews ("NIR's") for other contentious programs including the Role of the Fast Flux Test Facility (December 2000) and for the Stockpile Stewardship and Management Program (September 1996). Nonproliferation Analyses were conducted in the following DOE EIS or SWEIS review documents:

- o Final Site-Wide Environmental Impact Statement for the Y-12 National Security Complex (September 2001);
- o Final Environmental Impact Statement for the Production of Tritium in a Commercial Light Water Reactor (March 1999);
- o Final Environmental Impact Statement on Management of Certain Plutonium Residues and Scrub Alloy Stored at the Rocky Flats Environmental Technology Site (August 1998);
- o Final Programmatic Environmental Impact Statement for Tritium Supply and Recycling (October 1995).

In evaluating the alternatives for the LNL, the SW/SPEIS should consider the effects of the proposed actions on the federal policies of the non-proliferation treaties and international agreements. A number of treaties and international agreements, including but not limited to the following, have not been properly addressed:

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47/01.01  
cont.

- o *The Treaty on the Non-Proliferation of Nuclear Weapons* ("NPT") (Entered into force March 5, 1970) – The United States Government along with other ratifying states declared "...their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament." The SW/SPEIS should address how all the alternatives would meet these goals.
- o *The Missile Technology Control Regime* (1987) ("MTCR") – John Schlosser, Director, Office of Export Controls and Sanctions, Bureau of Nonproliferation, stated, "One of the key instruments in curbing missile proliferation is the Missile Technology Control Regime...[It] is the focal point of international efforts to curb the proliferation of missiles. The MTCR is not a treaty, but a political understanding among states that seek to limit the proliferation of missiles and missile technology... The United States encourages all governments to do so and to enforce vigorously controls on missile-related items." (in *Remarks to the Transshipment Enforcement Conference for Middle East States*, Barcelona, Spain, May 20, 2002) (emphasis added). The SW/SPEIS should address how all the alternatives would meet these goals.
- o *The Convention on the Physical Protection of Nuclear Material Article* (Ratified by the United States Feb. 8, 1987) – Section 4(4) "Each State Party shall apply within the framework of its national law the levels of physical protection described in Annex I to nuclear material being transported from a part of that State to another part of the same State,..." The SW/SPEIS should outline how DOE plans to follow Annex 1 for the transportation of nuclear materials to, from, and within LLNL.
- o *START I and START II* – "The Parties [US and Republics of the former USSR] agree that, in the event of the emergence in the future of a new kind of arm that one Party considers could be a new kind of strategic offensive arm, that Party shall have the right to raise the question of such an arm for consideration by the Joint Compliance and Inspection Commission in accordance with subparagraph (c) of Article XV of the Treaty." The SW/SPEIS should outline how site investigations will be conducted for compliance. It

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47/01.01  
cont.

should also detail how all the alternative actions would further the goals of Start II, which enters into force in December 2004. In step seven of the *Programme of Action (Next Steps) on Nuclear Disarmament*, the United States government agreed to the "early entry into force and full implementation of START II and the conclusion of START III as soon as possible..."

o Page: 24

*Programme of Action (Next Steps) on Nuclear Disarmament* (Sixth NPT Review Conference, May 20, 2000) – The United States agreed to follow several other steps leading to nuclear disarmament. Step six states the goal: "An unequivocal undertaking by the nuclear weapon states to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament to which all States parties are committed under Article VI." Step nine outlines several goals including:

- o "Further efforts by the nuclear weapon States to reduce their nuclear arsenals unilaterally;"
- o "Further reduction of non-strategic nuclear weapons"
- o "A diminishing role for nuclear weapons in security policies to minimize the risk that these weapons ever be used and to facilitate the process of their total elimination."

The *Programme of Action* also calls for a ratification of the comprehensive test ban treaty. Enabling LLNL to go forward with making the "enhanced test readiness" would undermine this objective. The SW/SPEIS should address how all the alternatives would meet these goals.

48/01.02

- o *Biological Weapons Convention* (entered into force on March 26, 1975) – "Under the terms of the convention, the parties undertake not to develop, produce, stockpile, or acquire biological agents or toxins." The SW/SPEIS should address how BioSafety Level 3 Laboratory meets the conditions of this agreement. The document should also

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48/01.02 cont. analyze how the labs will deal with the difficult legal issues presented by the potential "duel usefulness" of these experiments for offensive and defensive purposes.

VIII. ALTERNATIVES ANALYSIS

Adequacy of Information in § 3.6.1

49/31.06 Section 3.6.1 of the SW/SPEIS contains the comparison of impacts of alternatives. The limited discussion of differences and the simplified table of figures (Table 3.6-1), do not provide enough information, or direction to further information, for decision-makers or the public.

50/15.02 Environmental justice issues in this section, for example, are only discussed with regard to possible employment opportunities under the various alternatives. Importantly, environmental justice issues are also raised by the siting of toxic waste in near economically and socially disadvantaged peoples. Waste shipments to Hanford, for example, should be evaluated for environmental justice impacts, given the right of Native Americans to live and fish along the Columbia River in the vicinity of the Hanford Reservation. Table 3.6-1 addresses environmental justice but gives no discussion or detail. Table 3.6-1 also addresses biological resources and mentions (but does not define) "minor direct and indirect loss" of animals. Section 3.6.4 states (with no detail) that the biological impacts of the endangered and threatened species would be the same under all of the alternatives.

51/16.03 If the SW/SPEIS discusses environmental justice, biological resources, or any of these other issues, in greater detail elsewhere, the comparison of alternatives should be cross-referenced with these more detailed sections. The public is otherwise deprived of an informed evaluation of the issues at play and the fair opportunity to verify the analyses.

52/31.06 Vagueness

The SW/SPEIS continuously uses vague terms in describing effects and impacts. For example, the word "minimal" is used 110 times in the document without ever defining what it means

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52/31.06 cont. (similar terms include "negligible", "no significant," "disproportionately high," "adverse" and "small"). Similarly, Section 5.3.6.2 states, "Only the best management practices would be employed to minimize erosion resulting from ongoing operations; no additional impacts are expected." However, without defining and describing these "best management practices," neither decision-makers nor the public can meaningfully evaluate this alternative. Vague language like this, which permeates the document, does not provide a meaningful accounting of impacts.

Range of Alternatives

53/31.01 The SW/PEIS fails to meet its goals of informed agency decision making because of its inadequate assessment of a reasonable range of clearly defined alternatives. First, the differences between the No Action Alternative and the Reduced Operations Alternative are not clearly defined. For example, in Table 3.6-1 there is little appreciable difference between the two alternatives besides reduced workforce and its related factors. The SW/SPEIS made a good faith effort to provide sharply defined distinctions between and thus a clear basis for choice among the options as set out in CEQ regulation § 1502.14.

DOE also fails to consider a reasonable range of alternatives. The SWEIS in Section 3.1 claims that it considers a range of reasonable alternative from the minimum sustainable level (the reduced action alternative) to the highest reasonable activity levels (the proposed action alternative). But instead of considering alternatives in the range of minimum to maximum, they consider only the extremes, and the CEQ mandated No Action alternative. Further, the No Action Alternative does not appear to be "no action".

54/05.01 Finally, Section 3.2 states, "The No Action Alternative has been analyzed to comply with CEQ's NEPA implementing regulations (40 CFR Parts 1500-1508), providing a baseline against which the impacts of the Proposed Action and Reduced Operation Alternative can be compared." A baseline, by definition, is an option where the results of an action are already known. However, the "No Action Alternative," in this document does not serve as a baseline since it provides for future activities that have not occurred and been evaluated for impacts.

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## IX. CONCLUSION

This document fails to provide, through form or content, an adequate understanding of the environmental impacts and alternatives of the proposed actions at LLNL. This environmental review ultimately does not serve to create informed agency decision making, but appears instead to validate existing DOE decisions. This is especially evident in the choice of alternatives and the inclusion of a supplemental programmatic EIS within a site-wide EIS. We look forward to whatever measures DOE may take (e.g., a supplemental EIS) to rectify these inadequacies. The potential consequences of activities (reduced or increased) at LLNL are too grave and far-reaching to proceed without a more adequate review.

Sincerely,

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55/04.01,  
31.04

## Nuclear-materials truck disabled on highway

A scare raises serious concerns about safety

Thursday, June 27, 2002

By LARRY LANGE  
SEATTLE POST-INTELLIGENCER REPORTER

A Navy truck carrying an empty tank used to haul radioactive liquid briefly closed one lane of a state highway in Bremerton yesterday when a rear brake overheated. The incident raised new questions about the movement of hazardous material across the state.

The brakes overheated about 200 yards from the Puget Sound Naval Shipyard gate, sending smoke into the air from a rear wheel. The driver of the Navy truck cooled the brakes with an extinguisher.

"There was no radioactive release, there were no injuries and there was no public hazard," State Patrol Trooper Glen Tyrrell said.

But the incident was another reminder that radioactive material crisscrosses Puget Sound and the country every day, and some watchdog groups believe the risk of accidents releasing radiation could increase in coming years.

There have been auto accidents in Eastern Washington caused by dust storms in the arid region, said Hyun Lee, an attorney with Heart of America Northwest, a group monitoring the Hanford Nuclear Reservation.

"If that happened with a truck full of low level radioactive waste on a dusty, windy day, this stuff could get dispersed in the air," he said. Lee said the situation would worsen if hazardous materials, which can be flammable or corrosive, were added to the mix.

In yesterday's incident, the truck was hauling the tank to the Naval shipyard from the Bangor submarine station shortly before 11:30 a.m. when the brakes overheated.

A shipyard spokeswoman, Mary Anne Muscianica, said the tank was being taken to the shipyard for disposal. She could not say what radioactive liquids had been in it but said the tank had been recently cleaned.

Radioactive material and other forms of hazardous waste are hauled around the Sound and the country in "vast numbers," said Jerry Amato, an administrator for the Federal Motor Carrier Safety Administration.



Trooper Scott Gordon, right, and enforcement officer Jeff Osberg check the truck whose brake problem raised an alarm in Bremerton yesterday. The tank it carries is used for radioactive waste but was empty at the time. *Melina Mann / Seattle Post-Intelligencer*  
Click for larger photo.

The material ranges from common household items such as drain cleaner to automotive fuel, up to high-radiation nuclear waste and explosives.

Most of the materials are well-packaged and carried in small amounts that don't require a permit, Amato said, so there's no easy way to estimate the amount moved.

"The numbers are staggering," he said. "I don't know that anybody has that kind of (tracking) system."

In response to the terrorist attacks in September, there was some talk about improving the tracking for the shipment of radioactive material, said Sheryl Hutchison, spokeswoman for the state Department of Ecology.

"I think that's probably still under discussion," she said. "No proposal has come out of it."

In the meantime, the amount of radioactive material being transported is expected to increase.

The Hanford Nuclear Reservation in southeastern Washington is developing plans to increase the amount of radioactive waste it will receive from bomb-making facilities. There are also plans to accept radioactive waste mixed with hazardous chemicals, as well as material that is radioactive for thousands of years.

Under the new plan, a minimum of 70,000 trucks over 40 years will rumble into Washington carrying the deadly material, according to Heart of America Northwest.

And there are concerns about the shipment of waste from Hanford and the state's commercial reactor to a national waste repository. The U.S. Senate plans to decide soon whether to remove the last political hurdle to burying the waste in Nevada's Yucca Mountain, and opponents are using the transportation issue in an uphill effort to sway lawmakers to vote against the project.

Waste could be packed in massive casks and transported on highways.

Watchdog organizations are concerned about high levels of exposure, even if there are no accidents.

In Washington, the waste would travel within a mile of 87 schools and five hospitals, according to an analysis of shipping routes by the Environmental Working Group, a D.C.-based national research group. They also found that there were 366 fatal tractor-trailer wrecks from 1994 to 2000.

*P-I reporters David Eggeri and Lisa Stiffler and The Associated Press contributed to this story. P-I reporter Larry Lange can be reached at 206-448-6313 or larrylange@seattlepi.com*



The truck was hauling an empty tank to the Naval shipyard from the Bangor submarine station shortly before 11:30 a.m. when a brake overheated. Melina Mara / Seattle Post-Intelligencer  
Click for larger photo

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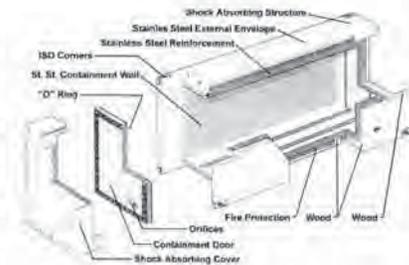
**DOENews**

**For Immediate Release**

**DOE Looks at New Shipping Package for WIPP Use**

**CARLSBAD, N.M., March 15, 2004** – A new transuranic (TRU) waste transportation package may soon be in use for Waste Isolation Pilot Plant (WIPP) shipments. Packaging Technology, Inc. of Tacoma, Washington, has submitted a safety analysis report to the U.S. Nuclear Regulatory Commission (NRC) seeking approval for the new Type B transportation package.

DOE is considering the new package, known as the Transuranic Package Transporter Model III (TRUPACT-III), for shipping large boxes of contact-handled TRU waste to WIPP. The TRUPACT-III is a rectangular package that measures 8'2" x 8'8" x 19'10.5". This new type of package would avoid the need to repackage waste in the large boxes into smaller containers to fit into existing shipping containers. Large waste boxes account for about 25 percent of the current TRU waste inventory.



-More-

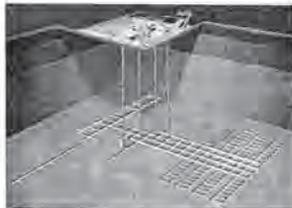
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Use of this new package and elimination of repackaging will simplify handling, avoid unnecessary radiation exposure to workers and reduce the overall number of shipments to WIPP by approximately 2,900.

The TRUPACT-III relies on a single, integrated structure to protect the waste containers that are placed inside it.

To obtain NRC certification, it must meet the same stringent requirements for normal transportation conditions and for severe accidents that existing certified containers must meet. The certified containers now used to transport TRU waste include the TRUPACT-II, HalfPACT, RH 72B and CNS 10-160B. All WIPP shipping packages must meet the rigorous NRC requirements before NRC certifies them for use. NRC approval is expected to take approximately 13 months.

DOE continues to seek improvements in transportation and operations, as well as its robust protection for human health and the environment.



WIPP is the nation's solution for cleaning up defense-generated transuranic waste located at DOE sites across the country. In operation since March 1999, WIPP has received over 2,300 waste shipments and has safely disposed of more than 18,000 cubic meters of transuranic waste in the repository located nearly one-half mile underground.

-30-

003DR0304

### Washington Beware:

#### A History of Waste Mismanagement at Nine Department of Energy Low-Level Waste Generators Shipping Waste to Hanford-

#### Demonstrating the Need to End Offsite Waste Burial at Hanford and to Investigate and Remediate Hanford's Low-Level Waste Burial Grounds

Primary Author: Sasha Hallissey Sajovic  
with  
Hyun S. Lee, J.D., LL.M.  
Gerald M. Pollet, J. D.

Heart of America Northwest

February 2000

#### 1. Summary of Findings and Introduction to Off-Site Low-Level Waste at Hanford

The United States Department of Energy (DOE) has demonstrated a long history of mismanagement of Low-Level radioactive wastes shipped to Hanford for burial, which has detrimentally impacted the environment of the State of Washington. This report shows that this mismanagement includes violations of federal and state hazardous waste laws, which did not end years ago as is often claimed. Therefore, the State of Washington and its Department of Ecology must bar the shipment of any additional off-site low-level waste (LLW) to the Hanford site for disposal. The state has the authority to bar such wastes, and moreover, the responsibility to do so.

This report documents that Hanford's Low-Level Burial Grounds (called LLBGs) are, in fact, Dangerous Waste landfills that violate federal and Washington State laws governing dangerous and hazardous waste landfills (i.e., Washington Administrative Code [WAC] 173-303-665, requiring "owners and operators of facilities that dispose of dangerous waste in landfills" to have liners and leachate collection systems). The Low-Level Burial Grounds are also in violation of the State of Washington's laws requiring investigation of potential contamination of groundwater and clean-up "within reasonable time period" WAC 173-303-645(11). Washington State has the authority to require corrective action, monitoring and the cessation of burial (especially of offsite wastes, burial of which does not help cleanup Hanford). SEE WAC 173-303-645(12), and 646(4). **Most importantly, the State of Washington lacks legal authority to make any deal with the DOE to make Hanford's Low-Level Burial Grounds a National Radioactive Waste Dump for offsite waste because the LLBGs are illegally operated dangerous waste landfills that fail to meet the most basic requirements for landfills containing dangerous waste. The proposed "deal" between Governor Locke and the USDOE to accept offsite wastes would be "ultra vires" (an agreement for which the state lacks legal authority) and illegal.**

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Based on DOE's long history of waste mismanagement and the unreliability of generators in properly identifying the nature of their shipments to Hanford, this report concludes that state regulators must not only re-examine their waste acceptance policy regarding DOE wastes but also stop offsite shipments because DOE can not reasonably assure the content and safety of the wastes being shipped to Hanford for disposal. More specifically, this report concludes that:

- 1) until Hanford's LLBG are in compliance with Washington's Dangerous Waste Law (leachate collection, monitoring, liners, etc...), and until the LLBG are investigated for apparent contamination of soil and groundwater, and until Offsite Generators can ensure that employees receive the required training for characterizing wastes, etc., the State of Washington should bar additional offsite waste shipments;
- 2) based on Lawrence Berkeley National Laboratory's illegal shipment and manifesting of Mixed Wastes (containing hazardous and/or dangerous wastes) as Low-Level Wastes, and on other numerous instances documented in this report, the State of Washington should send Department of Ecology hazardous waste inspectors to conduct on-site inspections of generator Low-Level Waste and Mixed Waste characterization, designation, packaging, manifesting and shipment procedures;
- 3) based on Brookhaven National Laboratory's problems with waste designation, waste traceability, inadequacies in manifesting shipments and poor quality assurance; Paducah Gaseous Diffusion Plant's problems with waste segregation and traceability; Lawrence Berkeley National Laboratory's illegal shipment and manifesting of Mixed Wastes (containing hazardous and/or dangerous wastes) as Low-Level Wastes; and the clear trends showing problems with all of DOE's offsite generators, Washington should ban shipments from these offsite generators and exercise its clear legal authority to treat all offsite wastes claimed by DOE to be Low Level Wastes at Hanford, or shipped to Hanford in the future, as Dangerous Wastes;
- 4) based on these documented violations by the offsite generators with designation, characterization, segregation, traceability, manifesting and packaging, the State of Washington should exercise its authority to regulate Dangerous Wastes and impose fines on generators, when they illegally ship or dispose of Dangerous Wastes as Low-Level Wastes - rather than solely imposing penalties on the Hanford site and Hanford contractors;
- 5) based on documentation of inadequate procedures for waste traceability, characterization, designation and packaging, poor employee training practices, the state of Washington should require in the sitewide RCRA permit that the offsite generators provide the full, long-term cost of managing the wastes - ending the practice of the generators paying only approximately 50% of the marginal cost of burying their wastes; and, USDOE should immediately begin to ensure that its offsite generators pay the fully burdened, long-term costs of monitoring wastes shipped to Hanford, and a proportionate share of the ultimate closure costs for burial grounds or storage facilities (Obviously, this would economically incentivize the generators to reduce the wastes they ship to Hanford, while the USDOE decision to ship waste to Hanford is based on NOT minimizing LLW volumes);
- 6) the State of Washington's Department of Ecology must have the financial resources and staff to monitor and inspect generators - Ecology should use its Mixed Waste permit fee authority to charge these costs;

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7) the State of Washington must start inspecting trucks with DOE radioactive waste at the state border for safety, packaging compliance and proper manifesting - as is currently required for commercial radioactive waste shipments. This can be required as a permit condition, without amending RCW 46.48.200, and WAC 446-50-050.

DOE assessments of nine generator sites, which have produced waste and shipped it to Hanford, including Argonne National Laboratories, Brookhaven National Laboratories, Lawrence Berkeley National Laboratories, Fermi National Accelerator Laboratory, KMS/Ann Arbor, Paducah Gaseous Diffusion Plant, Portsmouth Gaseous Diffusion Plant, Princeton Plasma Physics Laboratory, and Rocky Flats Plant illustrate a history of noncompliance with Hanford's own Waste Acceptance Criteria. DOE documents evidence numerous failures to adequately assure the safety of their shipments: to accompany waste shipments with complete and accurate property manifests; to properly package or accurately weigh waste shipments; to ensure the absence of free flowing liquids within the waste shipments; and to properly train or to document proper training for people handling these waste shipments. These problems illustrate a failure by DOE to be able to demonstrate an ability to meet requirements of Washington's Dangerous Waste Law and federal hazardous waste law for characterizing and designating wastes and ensuring that dangerous or hazardous wastes are not illegally disposed of in Hanford's Low-Level Burial Grounds.

While the DOE documents indicate many such compliance failures, it is unlikely that they capture the full magnitude of waste mismanagement at generator sites, since many of the assessments checklists used in DOE assessments are incomplete. This suggests that many waste generator sites do not take the assessments seriously, that the DOE has not been appropriately thorough in conducting the assessments, and that mismanagement is even wider spread than the documents indicate.

Problems at waste generator sites are significant, but constitute only part of the problem with waste shipments to Hanford. Department of Energy, Richland (DOE-RL) is complicit in years of mismanagement of off-site wastes. Hanford has a long history of storing its low level waste in unlined, essentially unmonitored and unregulated trenches, a procedure which has undermined Hanford's safety for years and continues to do so today. Furthermore, although DOE documents indicate that DOE-RL often detected problems with off-site waste before it was accepted at Hanford, they also reveal numerous failures at DOE-RL to identify risks before wastes were buried, and to correct problems when they came to light. The most disturbing example of this tendency was DOE-RL's illegal burial of "Mixed Waste" (waste that is both radioactive and contains either Dangerous Wastes or Hazardous Wastes) in the Low-Level Burial Grounds (LLBG) from 1989-1995, and its failure to correct the mistake when the waste was identified as mixed waste in 1996. **Hanford's LLBG are, therefore, Washington State Dangerous Waste landfills**, subject to Washington State hazardous waste law and administrative code (1.0.1). The Hanford site is currently non-compliant with Washington State law, reason enough to curtail additions of waste to the site.

The overwhelming evidence of problems at DOE waste generator sites and at Hanford should compel Washington State to continue the State's policy of opposing off-site waste imports. Yet, the DOE has issued a final decision (February 25, 2000) to make Hanford a **National Radioactive Waste Dumpsite**. The decision, is to ship LLW and MW from DOE facilities to two sites, one of which is Hanford. This would greatly increase the total waste buried at Hanford, and the potential contamination sources for groundwater and the Columbia River. As of January 12, 2000, the DOE

plan was to ship 105,000 cubic meters of mixed waste and 70,000 cubic meters of low-level waste to Hanford (1.0.2). This would be at least 13 truckloads of waste per week, and 676 truckloads of waste per year (1.0.3). This report, based on a review of documents obtained through the Freedom of Information Act, provides evidence of poor management of such waste in the recent past, and many dangerous mistakes in: characterizing wastes; designating wastes pursuant to Washington hazardous waste law; the lack of treatment and volume reduction; the illegal disposal of hazardous/dangerous mixed wastes in the Low Level Burial grounds; the lack of liners, leachate collection and RCRA compliant groundwater monitoring; groundwater contamination beneath the LLBG; the illegal failure by USDOE to have a closure and monitoring plan for the LLBG; the inability of generator sites to properly manifest and track the source and amounts of wastes sent to Hanford; in training problems identified for generator sites sending wastes; packaging violations...

Based on documents discovered through the Freedom of Information Act, the following report, organized by site, establishes DOE's history of LLW mismanagement and the likelihood that the shipment of additional waste will endanger the health of Washington State's environment and its inhabitants.

Document available in full at [www.heartofamericanorthwest.org](http://www.heartofamericanorthwest.org)

## Standards of Seismic Safety for Existing Federally Owned and Leased Buildings.

BRFL/COH

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings.  
(9537 K)

Cauffman, S. A.; Lew, H. S.

NISTIR 6762; 27 p. January 2002.

### Available from:

National Technical Information Service (NTIS), Technology Administration, U.S. Department of Commerce, Springfield, VA 22161.  
Telephone: 1-800-553-6847 or 703-605-6000;  
Fax: 703-605-6900, Rush Service (Telephone Orders Only) 800-553-6847;  
Website: <http://www.ntis.gov>  
Order number: PB2002-102211

### Keywords:

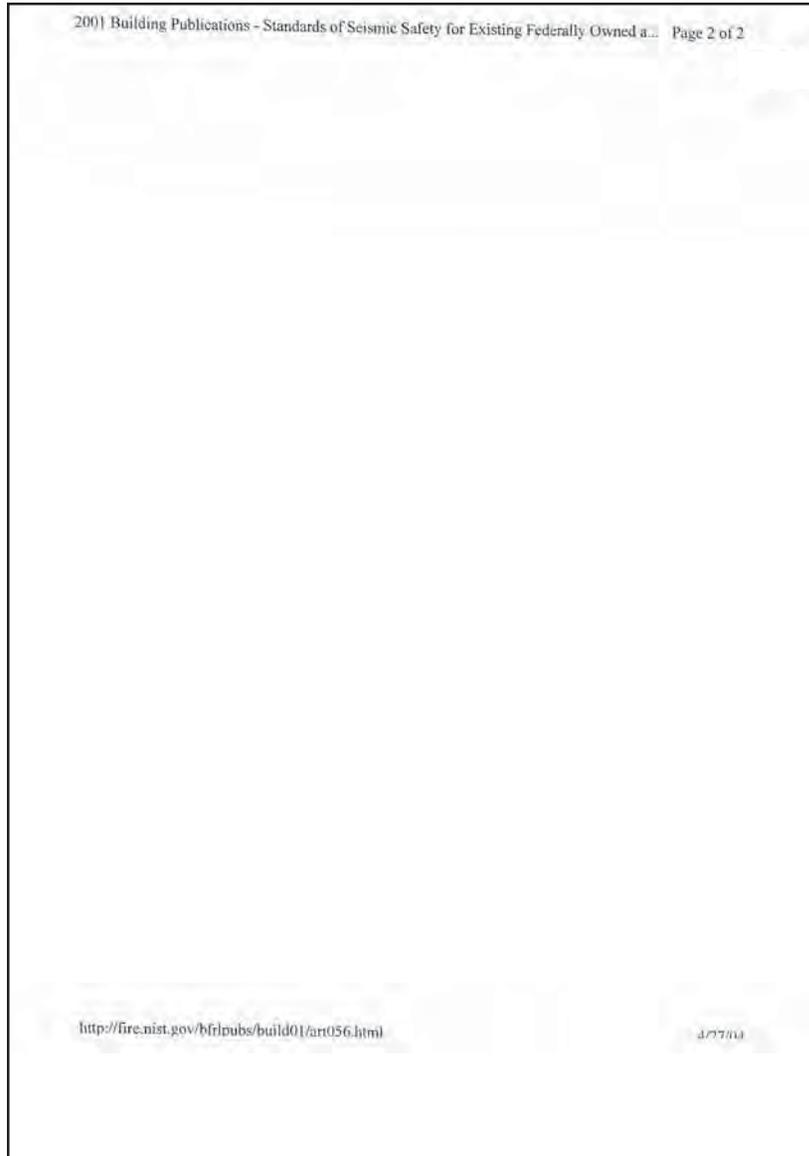
seismic; safety; federal buildings; evaluation; rehabilitation

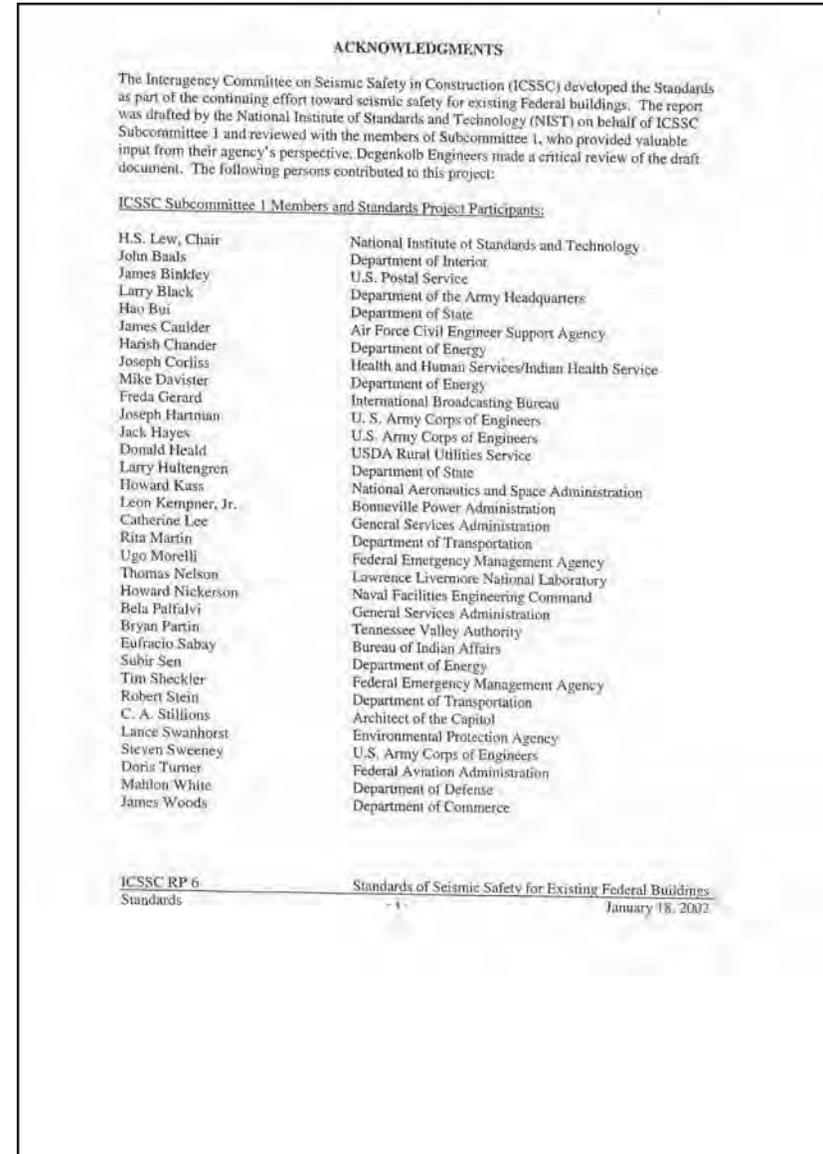
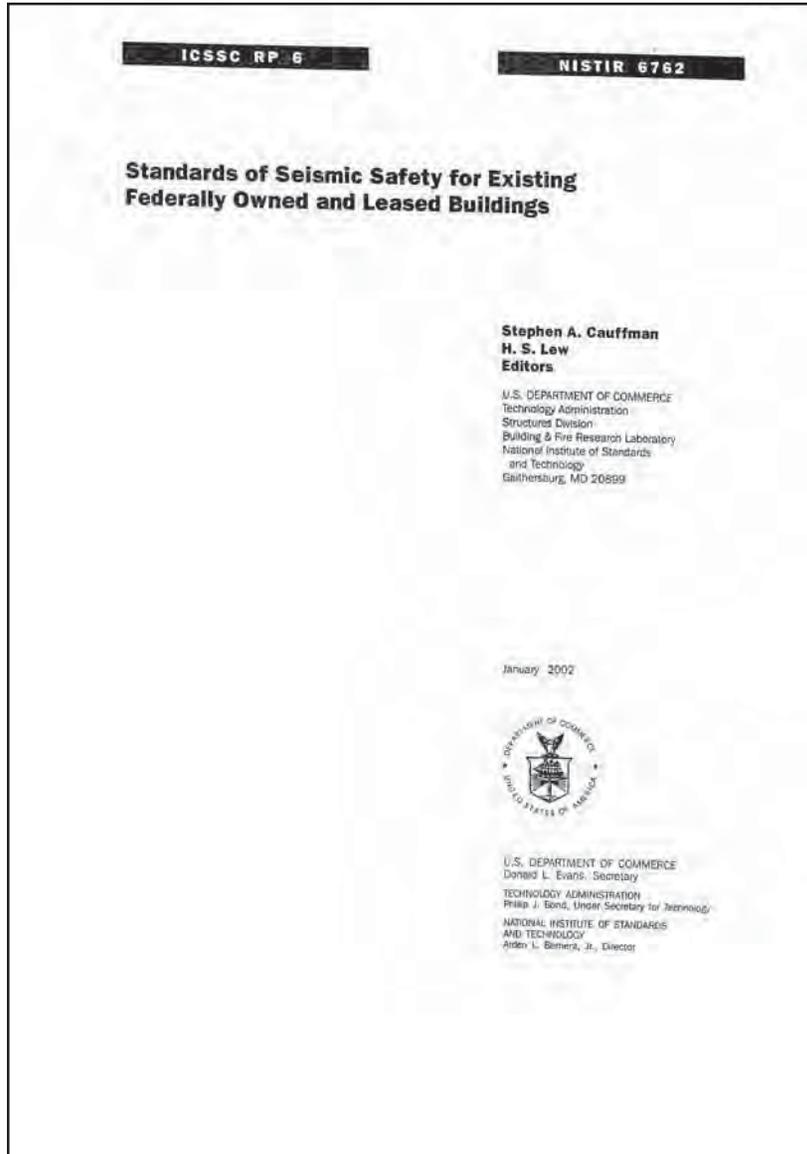
### Abstract:

*The seismic safety evaluation and mitigation standards, Standards for Seismic Safety for Existing Federally Owned and Leased Buildings, were developed for use by the Federal Government by the Interagency Committee on Seismic Safety in Construction (ICSSC) in conjunction with the National Institute of Standards and Technology (NIST) and with the funding support of several ICSSC member agencies. The intent of this document is to provide Federal agencies with minimum and extended standards for the evaluation and mitigation of seismic hazards in their building inventories. This document responds to Executive Order 12941 Sec. 4, which directs the ICSSC to "...update the Standards at least every 3 years," and to "...update the Standards within 2 years of the publication of the First Edition of FEMA's guidelines for Seismic Rehabilitation of Buildings and Commentary." Life-Safety is defined as the minimum acceptable performance objective for Federal buildings. This document further provides for an extended level of performance, Immediate Occupancy, where required to meet agency mission. FEMA 310, Handbook for the Seismic Evaluation of Buildings - A Prestandard, and FEMA 336, Prestandard and Commentary for the Seismic Rehabilitation of Buildings, provide the basis for defining these performance objectives and evaluation criteria. Situations requiring an evaluation and if necessary, mitigation, are identified. The Standards and Commentary include: an identification of situations that trigger application of the Standards, preliminary and detailed evaluation procedures, and mitigation requirements for the two performance objectives. Life-Safety and Immediate Occupancy.*

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National Institute of Standards and Technology  
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<http://fire.nist.gov/bfrl/nbs/iaq/02/05/05c.html>





ICSSC Technical Secretariat

Stephen Cauffman

Degenkolb Engineers

John Dal Pino  
Chris Poland

PREFACE

In response to Public Law 101-614, the *Standards of Seismic Safety for Existing Federally Owned or Leased Buildings and Commentary (RP 4)* was issued by the Interagency Committee on Seismic Safety in Construction (ICSSC) in 1994. Pursuant to Executive Order 12941, the *Standards* are periodically updated to incorporate advanced knowledge in earthquake engineering gained from research and from observed performance of structures in recent earthquakes. This document, *Standards of Seismic Safety for Federally Owned and Leased Buildings (RP 6)*, is the revision to the *Standards of Seismic Safety for Owned or Leased Buildings and Commentary (RP 4)*.

The intent of the Standards is to identify common minimum evaluation and mitigation measures for all Federal departments and agencies, and to ensure that all federal entities have a balanced, agency-conceived and controlled seismic safety program for their existing owned or leased buildings.

Since the issuance of *RP 4*, the Federal Emergency Management Agency (FEMA) has published a number of documents related to evaluation and rehabilitation of existing buildings. The *Handbook for the Seismic Evaluation of Buildings - A Prestandard (FEMA 310)*, supersedes the *NEHRP Handbook for the Seismic Evaluation of Existing Buildings (FEMA 178)*. The *Prestandard and Commentary for the Seismic Rehabilitation of Buildings (FEMA 356)* now provides guidance for seismic rehabilitation of buildings. Under the auspices of FEMA, standards for seismic evaluation and rehabilitation are being developed by the American Society of Civil Engineers (ASCE) based on FEMA 310 and FEMA 356. These documents are referenced and cited throughout the standards (RP 6) and as they become available, they will be incorporated into RP 6.

ABSTRACT

The seismic safety evaluation and mitigation standards, *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings*, were developed for use by the Federal Government by the Interagency Committee on Seismic Safety in Construction (ICSSC) in conjunction with the National Institute of Standards and Technology (NIST) and with the funding support of several ICSSC member agencies. The intent of this document is to provide Federal agencies with minimum (Life-Safety) and extended (Immediate Occupancy) standards for the evaluation and mitigation of seismic risks in their building inventories. This document responds to Executive Order 12941 Sec. 4, which directs the ICSSC to "...update the Standards at least every 5 years," and to "...update the Standards within 2 years of the publication of the First Edition of FEMA's *Guidelines for Seismic Rehabilitation of Buildings and Commentary*" (FEMA 273).

Life-Safety is the minimum acceptable performance objective for Federal buildings. This document further provides for an extended level of performance, Immediate Occupancy, where required to meet agency mission. FEMA 310, *Handbook for the Seismic Evaluation of Buildings - A Prestandard*, and FEMA 356, *Prestandard and Commentary for the Seismic Rehabilitation of Buildings*, provide the basis for defining these performance objectives, evaluation, and if necessary, mitigation criteria.

The Standards and Commentary include: an identification of situations that trigger application of the Standards, preliminary and detailed evaluation procedures, and mitigation requirements for the two performance levels, Life-Safety and Immediate Occupancy.

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STANDARDS

1.0 INTRODUCTION

The intent of the *Standards of Seismic Safety for Federally Owned and Leased Buildings* (hereinafter referred to as the *Standards*) is to provide Federal agencies with common minimum and higher standards for the evaluation and mitigation of seismic risks in their owned or leased buildings, and privately owned buildings on Federal land to ensure that all agencies have a balanced, agency-conceived and controlled seismic safety program. The *Standards* allow for two levels of seismic performance: a minimum Life-Safety level intended to provide a low risk of earthquake induced life safety endangerment and a higher Immediate Occupancy level, intended to minimize the risk of earthquake-induced impairment of mission, recommended for critical facilities. The *Standards* build upon previous efforts by the Interagency Committee on Seismic Safety in Construction (ICSSC) in support of the National Earthquake Hazards Reduction Program (NEHRP). This document supersedes the Interagency Committee on Seismic Safety in Construction's *Standards of Seismic Safety for Existing Federally Owned or Leased Buildings and Commentary* (RP 4).

The *Standards* consist of this Introduction and three additional sections as follows:

The **Application of the Standards** section identifies situations that trigger the application of the *Standards*, defines compliance with the *Standards*, and identifies additional measures that must be included in each agency's seismic safety responsibilities for existing buildings.

The **Evaluation Requirements** of the *Standards* identifies building data required before conducting a building evaluation and provides guidance on the application of FEMA 310 and FEMA 356 based on building type and other factors.

The **Mitigation Requirements** section of the *Standards* includes the requirements for mitigation of seismic risks; standards for rehabilitation of structural, non-structural, foundation/geologic/site, and adjacency hazards; guidance on incremental or partial rehabilitation; alternative mitigation methods; and rehabilitation of historic buildings based on FEMA 356.

C1 INTRODUCTION:

RP 4, published in 1994, was based upon FEMA 178, *NEHRP Handbook for the Seismic Evaluation of Existing Buildings*, which established the criteria for evaluating buildings to a performance level of Substantial Life-Safety. Since the publication of RP 4, several new documents have been published that have made RP 4 obsolete. The 1997 *NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures Parts 1 and 2* (FEMA 302 and 303) introduced new seismic hazard maps that better defined the risk of damaging ground shaking across the United States. These design maps were based on probabilistic seismic hazard maps produced by the U.S. Geological Survey. The maps provide median values of 5 % damped spectral accelerations at two periods (0.2 sec and 1.0 sec) for Site

Class B (FEMA 302), with a 2 % exceedance probability in 50 years (return period of about 2500 years). Prior to the 1997 NEHRP Recommended Provisions, ground shaking intensity was characterized by effective peak response acceleration,  $A_e$ , and effective peak velocity-related response acceleration,  $A_v$ . These values were derived from maps developed by Algermissen and Perkins for shaking with a 10 % exceedance probability in 50 years (return period of about 500 years) on rock sites.

In 1997, FEMA 273, *NEHRP Guidelines for the Seismic Rehabilitation of Buildings* and FEMA 274, *NEHRP Commentary on the Guidelines for the Seismic Rehabilitation of Buildings* were published. A prestandard based upon these documents was issued in November 2000 as *Prestandard and Commentary for the Seismic Rehabilitation of Buildings* (FEMA 356) and is accompanied by a resource document entitled, *Global Topics Report on the Prestandard and Commentary for the Seismic Rehabilitation of Buildings* (FEMA 357). FEMA 310, *Handbook for the Seismic Evaluation of Buildings, A Prestandard*, was published in 1998. (It will soon be published by the American Society of Civil Engineers as the ASCE 31 standard.) While FEMA 178 dealt only with the life-safety risk, FEMA 310 and FEMA 356 include procedures for evaluation and rehabilitation of buildings for Life-Safety and Immediate Occupancy performance levels.

1.1 Objectives

The primary objective of the *Standards* is to reduce the life-safety risk to occupants of Federal buildings and to the public. Life-Safety is the minimum performance level appropriate for Federal buildings. In addition, the *Standards* provide for a higher level of performance, commonly referred to as Immediate Occupancy, when needed to meet agency mission requirements. Both levels of performance are defined in Section 1.1.1 below.

C1.1 Objectives:

RP 4 established Substantial Life-Safety as the minimum performance level for Federally owned and leased buildings. Executive Order 12941 directed Federal agencies to adopt RP 4 for use in assessing the seismic safety of their owned and leased buildings and in mitigating seismic risks in those buildings. Recent earthquakes have clearly identified the importance of immediate use of critical facilities after an earthquake. Recognizing this need, FEMA 310 provides for evaluation to a higher level of performance, Immediate Occupancy, in addition to Life-Safety.

The *Standards* are not intended for use in judging the adequacy of past good-faith agency efforts at evaluation and mitigation; they are intended to establish appropriate minimums for actions taken after the *Standards* are formally adopted by the ICSSC.

1.1.1 Seismic Rehabilitation Objectives

FEMA 310 defines the Life-Safety and Immediate Occupancy Performance Levels as follows:

**Life-Safety Level:** Building performance that includes significant damage to both structural and nonstructural components during the design earthquake, though at least some margin against

either partial or total structural collapse remains. Injuries may occur, but the level of risk for life-threatening injury and entrapment is low. People will likely be unable to reoccupy the building for continuous use until structural repairs are completed.

**Immediate Occupancy Level:** Building performance that includes very limited damage to both structural and nonstructural components during the design earthquake. The basic vertical and lateral-force-resisting systems retain nearly all of their pre-earthquake strength and stiffness. The level of risk for life-threatening injury as a result of damage is very low. Although some minor repairs may be necessary, the building can be fully occupied after a design earthquake, and the needed repairs may be completed while the building is occupied.

In addition to these performance levels, FEMA 356 defines the Damage Control Structural Performance Range as the continuous range of damage states between the Life Safety Structural Performance Level and the Immediate Occupancy Structural Performance Level. Design for performance within the Damage Control Structural Performance Range may be desirable to minimize repair time and operation interruption, to protect valuable equipment or contents, or to preserve important historic features when the cost of design for Immediate Occupancy is excessive.

1.1.2 Additional Objectives

Federal agencies may pursue more stringent standards than Life-Safety for those buildings where a higher performance level is necessary to control damage or maintain post-earthquake operation for mission readiness. The *Standards* provide for evaluation and mitigation of seismic risks in Federal buildings to a performance level of Immediate Occupancy where this higher level of performance is needed. Buildings that must remain fully functional during an earthquake and afterwards (Operational Level) are beyond the scope of the *Standards* and must be evaluated using appropriate, agency specific criteria.

CI.1.2 Additional Objectives

Some Federal agencies own or lease buildings that house facilities that are considered essential or mission critical and should be evaluated to the Immediate Occupancy performance level. The definition of what is "essential" or "mission critical" needs to be determined by each individual agency. As a guide, Section 1.3.1 of the 2000 Edition, *NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures* (FEMA 368) defines the following buildings as essential facilities:

- Fire or rescue and police stations,
- Hospitals,
- Designated medical facilities having emergency treatment facilities,
- Designated emergency preparedness centers
- Designated emergency operation centers
- Designated emergency shelters
- Power generating stations or other utilities required as emergency back-up facilities for Seismic Use Group III (essential facilities)

- Emergency vehicle garages and emergency aircraft hangars
- Designated communication centers
- Aviation control towers and air traffic control centers
- Structures containing sufficient quantities of toxic or explosive substances deemed to be hazardous to the public
- Water treatment facilities required to maintain water pressure for fire suppression

The *Standards* provide tools for evaluating buildings to the Immediate Occupancy performance level. Agencies may, at their discretion, designate buildings other than those listed above to have a performance level of Immediate Occupancy. Levels of performance higher than Immediate Occupancy require consideration of all critical building systems and the availability of utilities. Such consideration is beyond the scope of the *Standards*.

1.2 Scope - Compliance Categories

The *Standards* address the potential vulnerability of Federal buildings to all significant seismic risks, which are grouped into four compliance categories:

- Structural,
- Nonstructural,
- Foundation,
- Geologic Site, and
- Adjacency.

The basis for evaluation of buildings within the United States (the fifty states and territories) shall be the Maximum Considered Earthquake (MCE) shaking values obtained from the seismic hazard maps, modified to account for Site Class effects and reduced by a factor of 2/3 as found in FEMA 310. The MCE maps show values of 5 % damped, spectral response accelerations with a 2% chance of exceedance in 50 years, except at some sites in highly active seismic regions, where MCE shaking contours are based on maximum magnitude earthquakes on the known faults in the region. As an alternative to using mapped values of MCE shaking demands, site-specific MCE seismic hazards defined using the site-specific procedure described in the 2000 *NEHRP Provisions*, incorporating detailed information about a particular site's geology and seismicity, may also be used.

CI.2 Scope - Compliance Categories

The compliance categories identified - structural, nonstructural, foundation, geologic site, and adjacency - are convenient groupings of sources of potential life-safety risks. Elements of all are included within the scope of FEMA 310. The adjacency category often will directly involve property not owned by the government and may therefore require legal or administrative intervention, rather than engineering solutions.

The seismic maps accompanying the 2000 *NEHRP Recommended Provisions* and referenced in the *Standards* represent the varying levels of seismic hazard for all areas in the United States.

These maps should be used by agencies along with site-specific studies (where appropriate) to establish the seismicity of a site.

1.2.1 Items Not Included in the Standards

The Standards do not include means to evaluate or mitigate the effects of:

- flooding,
- fire,
- wind,
- blast, or
- volcanic activity.

The Standards also do not address criteria for:

- repair of damaged or deteriorated buildings, including damage caused by previous earthquakes,
- preparation of post-earthquake preparedness plans, or
- seismic instrumentation of Federal buildings.

C1.2.1 Items Not Included in the Standards

Although there are obvious interactions between seismic hazards and other natural or manmade threats to buildings, a multi-hazard approach is beyond the scope of this document. However, before mitigation measures are taken for seismic deficiencies, it is strongly suggested that other potential hazards, particularly wind and blast, be considered. It is beyond the scope of these Standards to address evaluation and mitigation criteria for damaged or deteriorated buildings, including those buildings damaged by earthquakes. However, any agency conducting an evaluation of a building damaged by any cause must investigate the condition of both the vertical and lateral-force-resisting elements to ensure that these elements can perform dependably during an earthquake.

Seismic instrumentation of Federal buildings is not addressed by the Standards. Agencies should be encouraged to instrument a sample number of Federal buildings to record their responses during seismic events in order to validate and/or improve their expected performance.

1.3 Scope - Buildings

Except for buildings that require a seismic performance level beyond Life-Safety or Immediate Occupancy because of agency mission requirements, the following buildings are exempt from the Standards:

- a. all buildings located in regions of low seismicity where  $S_{DS} < 0.167$  g, and  $S_{D1} < 0.067$  g (unless designated by agency as a critical facility),
- b. detached one- and two-family dwellings located where  $S_{DS} < 0.4$  g.

- c. detached one- and two-family wood frame dwellings located where  $S_{DS} \geq 0.4$  g that satisfy the light-frame construction requirements of the 2000 NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures,
- d. agricultural and storage structures that are intended only for incidental human occupancy or that are occupied by persons for a total of less than 2 hours a day,
- e. one story buildings of steel light frame or wood construction with areas less than 280 m<sup>2</sup> (3000 ft<sup>2</sup>),
- f. special structures including, but not limited to: bridges, transmission towers, industrial towers and equipment, piers and wharves, and hydraulic structures,
- g. fully rehabilitated buildings that comply with these Standards, to the satisfaction of the owning agency, in all compliance categories (structural, nonstructural, foundation, geologic site hazards, and adjacency),
- h. post-benchmark buildings as defined in Table 1-1 which also comply with the structural, nonstructural, foundation, geologic site hazards, and adjacency compliance categories and are being evaluated to the Life-Safety Performance Level,
- i. pre-benchmark buildings which have been shown by evaluation to the satisfaction of the owning agency to be life-safe in all four compliance categories,
- j. buildings constructed for the Federal Government whose detailed design was done after the date of adoption of Executive Order 12699 (January 5, 1990) and that were designed and constructed in accordance with the ICSSC Guidelines and Procedures for Implementation of the Executive Order on Seismic Safety of New Building Construction, RP 2.1-A,
- k. buildings scheduled for demolition; temporary short-term leases; and foreclosure buildings,
- l. the remaining useful life of the building or the agency's requirement for the building has been identified as being less than five years,
- m. rehabilitated buildings that substantially comply with RP 4, or other agency specific standards and criteria to the satisfaction of the owning agency, in all four compliance categories (structural, nonstructural, foundation, geologic site hazards, and adjacency).

C1.3 Scope - Buildings

Buildings that require higher performance than Life-Safety should be identified as such prior to their elimination as exempted buildings to assure that they are given adequate consideration. Also, performance expectations for recently constructed buildings should be compared with their required objectives. Benchmark years, suggested in Table 1-1 of the Standards (Section 1.3.1), may not be applicable to the higher performance objectives.

The list of buildings that need not meet the Standards - either because they are unlikely to present a significant life-safety risk or because they do not fit within the boundaries commonly placed on building standards and technology - was developed considering the extent of application of FEMA 310, and previous exemptions listed in the Standards of Seismic Safety for Existing Federally Owned or Leased Buildings and Commentary, RP 4, that are still valid.

Item a. is based upon the recommendation by the ICSSC to exempt Federal buildings in regions of low seismicity. Agencies may, at their discretion, choose to apply higher performance levels to buildings located in areas where  $S_{05} < 0.167$  g and  $S_{10} < 0.067$  g to meet mission requirements. Item b, c, and d are based directly on the extent of application of FEMA 310. FEMA 310 does not automatically exempt any class of buildings, however, based on the exemptions contained in codes for new buildings, agencies may elect to exempt these classes of construction. Items e, g, h, and i have been retained from RP 4.

1.3.1 Benchmark Buildings

A benchmark building is one that was designed and built in accordance with adequate seismic provisions, which are considered to provide acceptable life-safety protection. The determination of benchmark years is complex and varies with building location, age, structural system, and governing building code. A table of benchmark years is provided in Table 1-1. Note that if the seismicity of a region has changed since the benchmark dates listed in Table 1-1, a building must have been designed and constructed or evaluated in accordance with the current seismicity of the region to be compliant with the Standards. Only buildings designed and constructed in accordance with the documents listed in Table 1-1 and being evaluated to the Life-Safety Performance Level may be considered Benchmark Buildings.

Table 1-1: Benchmark Buildings

Building Type <sup>1,2</sup>	Model Building Seismic Design Provisions			
	BOCA	SBCCI	UBC	NEHRP
Wood Frame, Wood Shear Panels (Type W1 & W2)	1993	1994	1976	1985
Wood Frame, Wood Shear Panels (Type W1A)	1993	1994	1976	1985
Steel Moment Resisting Frame (Type S1 & S1A)	*	*	1994 <sup>3</sup>	**
Steel Braced Frame (Type S2 & S2A)	1993	1994	1988 <sup>3</sup>	1991
Light Metal Frame (Type S3)	*	*	*	*
Steel Frame w/ Concrete Shear Walls (Type S4)	1993	1994	1976	1985
Reinforced Concrete Moment Resisting Frame (Type C1) <sup>3</sup>	1993	1994	1976	1985
Reinforced Concrete Shear Walls (Type C2 & C2A)	1993	1994	1976	1985
Steel Frame with URM Infill (Type S5, S5A)	*	*	*	*
Concrete Frame with URM Infill (Type C3 & C3A)	*	*	*	*
Tilt-up Concrete (Type PC1 & PC1A)	*	*	*	*
Precast Concrete Frame (Type PC2 & PC2A)	*	*	*	*
Reinforced Masonry (Type RM 1)	*	*	1997	*
Reinforced Masonry (Type RM 2)	1993	1994	1976	1985
Unreinforced Masonry (Type URM) <sup>4</sup>	*	*	1991	*
Unreinforced Masonry (Type URM A)	*	*	*	*

<sup>1</sup>Building Type refers to one of the Common Building Types defined in FEMA 310, Table 2-2 (p. 2-6 through 2-10).

<sup>2</sup>Buildings on hillside sites shall not be considered Benchmark Buildings.

<sup>3</sup>Flat Slab Moment Resisting Frame Buildings shall not be considered Benchmark Buildings.

<sup>4</sup>Steel Moment-Resisting Frame Connections shall comply with the 1994 UBC Emergency Provisions, the 1997 UBC, the 1997 AISC Seismic Provisions, the 2000 IBC or FEMA 350; or the analytical evaluation provisions of FEMA 351.

<sup>5</sup>Buildings with thin-walled steel tubes in braced frames shall not be considered Benchmark Buildings.

<sup>6</sup>URM buildings evaluated using the ABK Methodology (ABK, 1984) may be considered benchmark buildings.

<sup>7</sup>Refers to the UCBC.

\*No benchmark year; buildings shall be evaluated using the Standards.

\*\*Local provisions shall be compared with the UBC.

BOCA – Building Officials and Code Administrators, *National Building Code*.  
SBCCI – Southern Building Code Congress International, *Standard Building Code*.  
UBC – International Conference of Building Code Officials, *Uniform Building Code*.  
NEHRP – Federal Emergency Management Agency, *NEHRP Recommended Provisions for the Development of Seismic Regulations for New Buildings and Other Structures*.  
UCBC – Uniform Code for Building Conservation

Note: Table adapted from fourth ballot version of ASCE Draft Standard for Seismic Evaluation of Existing Buildings.

C1.3.1 Benchmark Buildings

The establishment of benchmark years that will automatically qualify buildings as being structurally adequate is complex. The designation of benchmark years changes to reflect new knowledge gained from studying the performance of buildings in seismic events, from new research results, and other relevant information. Table 1-1 reflects the benchmark years adopted by the ICSSC for Federal Buildings. Benchmark years for any previously used seismic provisions can be established by comparing resulting designs by building types with the acceptance standards. Care must be taken in such comparisons to consider all possible variations of the building type studied.

1.3.2 Leased Buildings

The Standards shall apply to all or portions of non-Federally owned buildings leased by the Federal Government, unless exempt under the provisions of Section 1.3

The following provisions shall also apply:

- a. No new leases or lease renewals/extensions shall be made in buildings that do not comply with the Standards.

**Exception:** If no seismically conforming space is available, otherwise acceptable space with the best seismic resistance shall be pursued.

- b. The building owner shall obtain certification by a registered professional engineer that the building conforms to the Standards.

C1.3.2 Leased Buildings

Non-federally owned buildings in which the Federal Government leases space are subject to the *Standards*, unless exempt per Section 1.3. RP 4 provided an exception that allowed agencies to continue leasing space in non-conforming buildings if no other conforming space was available.

1.3.3 Privately-Owned Buildings on Federal Land

The *Standards* shall be applied to all privately owned buildings located on Federal land. Application of the *Standards* to evaluation and rehabilitation of seismic risks shall be the responsibility of the building owner.

C1.3.3 Privately-Owned Buildings on Federal Land

Privately-owned buildings on Federal land, such as concessionaire buildings in National Parks, schools on military bases, and buildings constructed and owned by private contractors with long-term exclusive relationships with Federal agencies, were exempted by RP 4. However, the ICSSC has recommended that these buildings be evaluated and that unacceptable seismic risks be mitigated. As a result, the *Standards* shall apply to all privately owned buildings located on Federal land.

2.0 APPLICATION OF THE STANDARDS

This section defines those situations that trigger a seismic evaluation and rehabilitation of a Federal building.

2.1 Situations Requiring Evaluation and Mitigation

At a minimum, a building shall be evaluated and unacceptable risks mitigated when any of the following occur:

- a. a change in the building's function which results in a significant increase in the building's level of use, importance, or occupancy, as determined by the agency.
- b. a project is planned which significantly extends the building's useful life through alterations or repairs which total more than 30 % of the replacement value of the facility.
- c. the building or part of the building has been damaged by fire, wind, earthquake, or other cause to the extent that, in the judgement of the agency, significant structural degradation of the building's vertical or lateral load carrying systems has occurred.
- d. the building is deemed by the agency to be an exceptionally high risk to occupants or the public at large, or
- e. the building is added to the Federal inventory through purchase or donation after adoption of the *Standards*.

C2.1 Situations Requiring Evaluation and Mitigation

Seismic risk mitigation programs consist of both "active" and "passive" components. "Active" components of a seismic risk mitigation program specifically require some action to be taken, such as inventory, evaluation, planning for rehabilitation, and rehabilitation of buildings.

The focus of the "passive" components or "triggers" is on changes to the building which increase its life or value or will increase the risk level of the building, such as a change in occupancy. The philosophy of the use of triggers is to achieve safety similar to a new building when renovating an old building. Such triggers also serve to gradually reduce the overall seismic risk presented by the existing building stock. Since such triggered improvements will be done concurrently with significant non-seismic work, the cost and disruption attributable to the seismic rehabilitation is minimized.

In the private sector, strict enforcement of such triggers has also served to effectively limit improvements to the existing building stock and at times has encouraged careful planning to avoid the triggers.

The basic triggers listed in this section encourage consistent application of the "renovation" philosophy discussed above. Because of the efficiency of combining seismic rehabilitation with other work, additional triggers may be advantageous for each agency considering characteristics of its own program.

The definition of the term "exceptionally high risk" varies from agency to agency but is based upon consideration of one or more of the following factors: (1) seismicity of the building site,

(2) structural system, (3) number of occupants, (4) date of construction, (5) number of stories, (6) occupancy type, (7) size (area), (8) structural irregularities, (9) unusual building geometry or characteristics, and (10) importance of building to agency mission.

A building presenting an "exceptionally high risk" may be discovered at any time, either in a systematic evaluation process, or by review of the building for other purposes. A plan to reduce such high risks should be developed immediately. One or more of the mitigation measures listed in Section 4.1 should be considered.

Item e. is intended to prevent unsafe buildings from being permanently added to the Federal inventory, by triggering a seismic evaluation and if necessary, mitigation, when they are acquired. It is not intended to apply to buildings temporarily under Federal ownership, such as those in the assets of failed banks placed under Federal guardianship. Newly leased buildings are covered in Section 1.3.2.

**2.2 Compliance**

A building is considered to be in compliance with the *Standards* if the building is:

- a. exempt from the *Standards* in accordance with Section 1.3,
- b. determined by evaluation to be in compliance with the *Standards* in accordance with Section 3.0, or
- c. unacceptable seismic risks have been mitigated in accordance with Section 4.0.

Compliance with the *Standards* should result in a minimum performance level of Life-Safety. The *Standards* also provide for the evaluation of buildings and mitigation of seismic risks to meet the higher performance level of Immediate Occupancy where this level of performance is required to meet the agency's mission.

**2.3 Qualifications of Evaluators, Designers, and Reviewers**

In general, all evaluation, development of mitigation approaches, and design of rehabilitation work shall be prepared by a registered professional engineer with experience in the type of work being considered. For independent peer reviews of alternative or innovative evaluation methods, analysis techniques or rehabilitation concepts required by the *Standards*, an individual highly qualified in the field of earthquake engineering or a panel of such individuals should be selected by the agency. Tier 2 and Tier 3 evaluations in accordance with FEMA 310 of potential foundation deficiencies, and geologic site hazards should be conducted by a geotechnical engineer or engineering geologist qualified to perform the work by registration and/or experience.

**C2.3 Qualifications of Evaluators, Designers, and Reviewers**

Registered engineers should be used to evaluate seismic risks for each of the four compliance categories for a specific building and to plan rehabilitation schemes necessary for mitigation. The experience and qualifications of the individuals should match the scope and complexity of

the assignment. Registration as a Professional Engineer is intended to ensure that an individual possesses at least a familiarity with design and analysis of buildings for lateral loads. In addition, training and experience in seismic investigations should be required.

Those with a minimum amount of such background experience may be qualified for relatively small and simple buildings. Highly qualified individuals may be required for complex buildings or for peer review. Such persons will likely have academic credentials far beyond the bachelor level with courses in structural dynamics, inelastic analysis, and other topics in advanced earthquake engineering. They may have published technical articles on seismic issues of existing structures or be active in related professional organizations. Their project experience should relate specifically to seismic investigations of structures. They should be capable of providing personal references attesting to their successful completion of projects similar to that contemplated by the agency.

A specialist in geology or geotechnical engineering should be used for evaluation of foundation deficiencies and geologic site hazards.

**2.4 Additional Requirements**

As part of each agency's seismic safety responsibilities for existing buildings, the following measures shall be implemented as appropriate:

- a. development of standards for seismic performance levels higher than Life-Safety and Immediate Occupancy if necessary to carry out agency mission,
- b. development and dissemination of agency-specific policies consistent with all provisions of the *Standards*,
- c. assurance that consistent measures of quality control are included in such policies and applied to all phases of evaluation, design, and construction, in a manner consistent with FEMA 310 and FEMA 356, and
- d. assurance that agency-specific standards and procedures for evaluation and mitigation of hazards are substantially equivalent to or more stringent than FEMA 310 and FEMA 356 or successor documents adopted by the ICSSC.

**C2.4 Additional Requirements**

Item c., quality control, cannot be overlooked in a seismic hazard mitigation project. All phases of a project, including evaluation, design, and construction, must be monitored and evaluated to be successful. Guidance from documents like the *Standards*, FEMA 310, and FEMA 356/357 is needed in order to consistently identify and improve seismically hazardous buildings. However, earthquake engineering is not an exact science. Codes are constantly developing in an attempt to incorporate new research results and to balance safety, building performance, and cost. Considerable engineering judgement is required to properly apply the provision of the *Standards* to existing buildings. Reviews of evaluations for consistency, of construction documents for adequacy, and of construction itself for compliance with drawings and construction standards are all essential to maximize effectiveness of the project.

Item d. is intended to serve as a generalized "grandfather" clause. It is not the intent of the Standards to rewrite agency procedures but to set common minimum standards for use by all Federal agencies. Once the Standards are formally adopted for Federal use, each agency should be able to demonstrate that its existing programs meet or exceed the Standards, which should be considered a minimum acceptable level of seismic safety for Federal buildings.

3.0 EVALUATION

The purpose of the evaluation described in this section is to determine whether buildings meet the Life-Safety or Immediate Occupancy performance levels as required to meet agency mission. FEMA 310 provides a seismic evaluation process for existing buildings in any region of seismicity to either the Life-Safety or Immediate Occupancy levels. The flowchart shown in Figure 3-1 provides an overview of the evaluation process, but does not include further evaluation steps that may be required based on irregularities or height limits for model building types. Note also that an agency may determine, through a risk assessment, that the level of risk is sufficiently low that mitigation is not required.

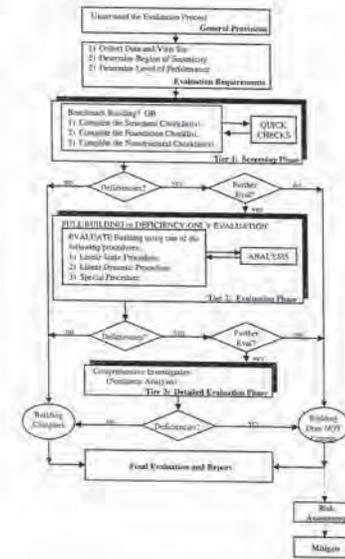


Figure 3-1: Schematic of Evaluation Process.

3.1 Evaluation Requirements

Seismic evaluation of a building for a specific performance level shall be carried out to satisfy the objectives of the *Standards* (Section 1.1). The level of performance shall be established by the agency having the jurisdiction over the building.

All buildings that do not meet the exemption criteria defined in Section 1.3 shall be evaluated using the procedures set forth in FEMA 310 or successor document. Buildings complying with the intent of all the requirements of FEMA 310 (or successor document) shall be deemed to meet the specified performance level, either Life-Safety or Immediate Occupancy.

Buildings may be evaluated for higher levels of performance than Life-Safety and Immediate Occupancy by other well-established procedures based on rational methods of analysis.

C3.1 Evaluation Requirements

FEMA 310 provides a three-tier process for seismic evaluation of existing buildings. The procedures allow buildings to be evaluated to either the Life-Safety or Immediate Occupancy level. A Tier 1 evaluation shall be conducted for all non-exempt buildings in accordance with the requirements of Chapter 3 of FEMA 310. The Tier 2 evaluation is intended to be a detailed follow-up on the potential deficiencies that are identified by the Tier 1 evaluation. For relatively short, regularly configured buildings with a predictable earthquake performance record, the Tier 2 evaluation need only address the identified deficiencies as outlined in FEMA 310. A full building evaluation is not needed since it will likely not identify any other deficiencies that need attention. For all other buildings, a full building evaluation is needed along with the detailed consideration of the identified deficiencies to assure that the performance objective is properly addressed. Full building Tier 2 or Tier 3 evaluations are required for Immediate Occupancy performance level, taller buildings, and buildings that resist earthquakes in a complex manner. The evaluation process may be terminated and the building deemed to be compliant with the *Standards*, if the results of analysis demonstrate that the building or its elements satisfy performance requirements.

Special and historic buildings, because of their importance and value to the society, may be evaluated to an appropriate level of performance using rational methods of analysis based on principles of mechanics. The performance level may be better than or less than required for life-safety, depending on the building and whether the historic fabric is to be protected adequately. It is important to note that FEMA 310 is intended to serve as a guideline reference for evaluation of buildings, but strict adherence to the letter of the document may not be appropriate at all times. Engineering judgement must be applied in situations where FEMA 310 is silent or not applicable. What is important is that agencies meet the intent of FEMA 310, i.e. meet the performance goal desired, when evaluating their buildings.

**4.0 MITIGATION**

4.1 Requirements

Rehabilitation of buildings shall be performed in accordance with FEMA 356 or other methods that are consistent with and achieve a Performance Level that is equivalent to those prescribed in the *Standards*. Alternatives to rehabilitation include, but are not limited to the following:

- a. removal of the building from an agency inventory by termination of lease agreement, sale with full disclosure, or demolition.
- b. permanent evacuation of the building, or
- c. change in occupancy of the building such that it becomes exempt in accordance with Section 1.3.

C4.1 Requirements

The *Standards* require reducing the risk to life loss in all federally owned and leased buildings and in private buildings on Federal land in the largest expected earthquake and acceptable performance of buildings requiring immediate occupancy as specified by each agency. Mitigation measures may or may not include rehabilitation of the building itself. In some cases, the nature or extent of necessary rehabilitation can be so extensive that abandonment and relocation is a cost effective alternative.

4.2 Minimum Standards and Scope for Rehabilitation

If shown by evaluation that the desired performance level is not satisfied, the rehabilitation of any building or site to attain the Life-Safety level and/or the Immediate Occupancy level shall satisfy substantially the requirements of FEMA 356.

C4.2 Minimum Standards and Scope for Rehabilitation

Since FEMA 310 is not a design standard, rehabilitation work must comply with FEMA 356 or agency standards if their requirements are more stringent than FEMA 356.

4.3 Incremental/Partial Rehabilitation

Risk-reduction by incremental or partial rehabilitation of a building is acceptable as an interim step in a complete seismic mitigation process. It shall be permitted only if the partial rehabilitation is designed and constructed in accordance with FEMA 356 and takes into account future completion of the rehabilitation objective. In addition, such partial rehabilitation shall comply with the following conditions:

- a. The rehabilitation measures shall not result in a reduction in the performance level of the existing building;

- b. The rehabilitation measures shall not create a new structural irregularity or make an existing structural irregularity more severe; and
- c. All new or rehabilitated structural components and elements shall be detailed and connected to the existing structure in compliance with the requirements of FEMA 356.

**C4.3 Incremental/Partial Rehabilitation**

For a variety of reasons, it may be necessary to complete a rehabilitation project in several phases. This practice is acceptable as long as rehabilitation measures do not reduce the performance level of the existing structure at any time, except during actual rehabilitation construction. The requirement demands careful consideration of the performance of the structure after each increment of rehabilitation in accordance with FEMA 356.

**4.4 Local Modification of Components**

Local modification of deficient components shall be permitted as an applicable rehabilitation measure as long as the resultant rehabilitation conforms to FEMA 356.

**C4.4 Local Modification of Components**

Some existing buildings have substantial strength and stiffness, but some of their components may not have adequate strength, toughness, or deformation capacity to satisfy the rehabilitation objectives. An appropriate rehabilitation measure for such structures may be to perform local modifications of components that are inadequate while retaining the basic configuration of the building's lateral-force resisting-system provided that the rehabilitation measures conform to FEMA 356.

**4.5 Removal or Lessening of Existing Irregularities**

Removal or lessening of existing irregularities shall be permitted as an applicable rehabilitation measure, provided the completed rehabilitation conforms to FEMA 356.

**C4.5 Removal or Lessening of Existing Irregularities**

Removal or lessening of existing irregularities may be an effective rehabilitation measure if a seismic evaluation shows that the irregularities result in the inability of the building to meet the performance objective but that their removal would achieve it.

**4.6 Innovative Mitigation Methods**

Innovative mitigation methods that are beyond the scope of the requirements of FEMA 356 shall be permitted, provided an analytical procedure acceptable to the agency shows that the required performance level is attained. When new and innovative rehabilitation techniques are proposed for a specific building, a peer review panel, acceptable to the agency, shall determine the adequacy of the mitigation techniques proposed by the engineer (see Section 2.3).

**C4.6 Innovative Mitigation Methods**

New materials and structural systems, or other non-complying techniques are generally allowed by building codes subject to some form of review and approval. Generally, the alternative methods must conform to the intent of the prevailing standard. This allowance is particularly important for the seismic rehabilitation of existing buildings due to large numbers of special conditions that inevitably arise. Many private and public institutions have established procedures for peer review. Some have standing panels; others hire reviewers specifically for projects when the need arises. Agencies should establish policies to ensure the independence and qualifications of the reviewers. The policy should also cover the general procedures to be followed by the engineer and the reviewers.

**4.7 Historic Buildings**

Historic buildings shall not be exempted from the Standards, and depending upon their use may be required to meet the same performance objectives as all other buildings in the Federal inventory. Many codes covering historic buildings allow some flexibility in required performance depending on the effect of rehabilitation on important historic features. In some cases, it may be appropriate to rehabilitate an historic building to the Damage Control Structural Performance Range per FEMA 356 to ensure that the architectural fabric survives certain earthquakes.

In preserving the historic fabric of these buildings, publications such as the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings and Standards for the Treatment of Historic Properties shall be used. Alternative methods of mitigation of seismic risks for historic buildings shall be permitted subject to the requirements of Section 4.6.

**C4.7 Historic Buildings**

The rehabilitation of historic buildings is a sensitive process. The design professionals must take care to protect the historical character and fabric of the building as much as possible. This reduces the flexibility and freedom to make alterations to the structure. In the development of mitigation strategies, consideration must be given to the architectural and historic value of the building. Many codes covering historic buildings allow some amount of flexibility in required performance, depending upon the effect of rehabilitation on important historic features. Modern building standards, including FEMA 356, do not specifically cover the use of all archaic materials and systems. The intent of the Standards is to provide essentially the same level of seismic performance objectives as for others without unreasonable impediment to the historic preservation process. Consequently, alternative mitigation methods (see Section 4.6) are allowed and encouraged when they can lessen the impact of the structural strengthening.

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Standards - 19 - January 18, 2002

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ICSSC RP 6 Standards of Seismic Safety for Existing Federal Buildings  
Standards - 20 - January 18, 2002

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## Preview spoils nuclear plant security test

From Mike Ahlers  
CNN Washington Bureau

WASHINGTON (CNN) — An exercise to test preparedness against a terrorist attack at a nuclear weapons plant in Oak Ridge, Tennessee, was compromised last summer when guards got a peek at the plans, according to a report by the Department of Energy's inspector general.

The report, issued Monday, further said there was "compelling" evidence that security tests have been manipulated since the mid-1980s.

The Y-12 National Security Complex — approximately 600 buildings over 811 acres — was established along with the nearby Oak Ridge National Laboratory during World War II as part of the Manhattan Project to build the atomic bomb.

Both are situated on the 33,750-acre Oak Ridge Reservation that is home to a number of Department of Energy science and technology programs.

Several sensitive activities take place at the Y-12 plant, including the warehousing of enriched uranium and the dismantlement and storage of weapons. The site was being tested to see if it could defend against potential security incidents.

But the exercise was compromised when personnel were shown computer simulations of the attack in advance, according to the DOE inspector general's office.

"As a consequence, the test results were, in our judgment, tainted and unreliable," the report said.

The test manager became suspicious after guards at the Y-12 complex fended off all four simulated attacks, each involving a different scenario, Inspector General Gregory H. Friedman wrote.

Computer models had predicted the attackers would prevail in two of the scenarios.

The manager investigated and found that shortly before the June 26 test, two security workers employed by Wackenhut Services Inc. were inappropriately allowed to view the computer simulations of the four scenarios, the report said.

<http://www.cnn.com/2004/US/01/26/nuclear.plant.test/index.html> Page 1 of 2

CNN.com - Preview spoils nuclear plant security test - Jan 26, 2004 4/27/04 10:28 AM

Wackenhut, based in Palm Beach Gardens, Florida, has provided security at the facility since January 2000. It is owned by Group 4 Falck A/S, a Danish company that claims to be a world leader in security services. (Wackenhut)

The report said the inspector general's office interviewed more than 30 current and former security personnel.

Some of those interviewed "provided us with compelling testimony that there has been a pattern of actions by site security personnel going back to the mid-1980s that may have negatively affected the reliability" of security tests, the report said.

Among the reported abuses:

- Security personnel would be assigned to "tail" those acting as aggressors while they were touring Y-12 buildings in preparation for an exercise.
- Managers would increase the number of available responders and put well-prepared security personnel in place of lesser-prepared personnel before an exercise.
- In an exercise in late 2000 or early 2001, security managers told security officers "the building and target to be attacked, the exact number of adversaries, and the location where a diversion would occur."
- In simulated attacks where security personnel wore gear to determine whether they had received a simulated fatal gunshot, participants at times removed the batteries from the gear, put the batteries in backward, or placed tape, mud or Vaseline over the sensors so they would not operate properly.

The inspector general's office said that while no one had documentation to support the allegations, "the extent and the nature of the testimonial evidence" was compelling.

The Department of Energy did not immediately respond to calls from CNN. But in the report, the DOE's National Nuclear Security Administration "concurred" with the findings and said it was implementing a series of corrective actions.

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May 17, 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550  
Telefax: Tom.grim@oak.doe.gov <mailto:Tom.grim@oak.doe.gov>

RE: Request For A 30 Day Extension For Public Comment On The Draft Site-Wide Environmental Impact Statement For Continued Operation Of Lawrence Livermore National Laboratory And Supplemental Stockpile Stewardship And Management Programmatic Environmental Impact Statement (LLNL SW/SPEIS)

Dear Mr. Grim:

The Green Party USA requests a 30 day extension on the LLNL SW/SPEIS deadline for public comments, which would make the new deadline June 27, 2004.

The public comment process is a fundamental aspect of the National Environmental Policy Act. In order to have high quality written comments there must be adequate time for people to read, analyse and write their comments. Because the LLNL SW/SPEIS is well over 2,000 pages and very technical, this task requires adequate time for people to participate.

1/31.02 Ultimately, the increased participation and quality of participation should in the long-run save time and money because potential problems will be addressed in the planning stages rather than after something goes wrong.

In addition, many of our members in California and across the United States have recently learned about the LLNL SW/SPEIS due to publicity in the media. Therefore, these members are up against a very short timeframe to prepare comments. This is another reason, why it is important that the deadline be extended.

We appreciate your considering our letter and request a response by May 21, 2004.

Sincerely,

Don Fitz  
Green Party USA

cc Bert Heffner, LLNL, heffner1@llnl.gov

Senator Dianne Feinstein, michele\_senders@feinstein.senate.gov  
<mailto:michele\_senders@feinstein.senate.gov>

Senator Barbara Boxer, jennifer\_tang@boxer.senate.gov

Representative Ellen Tauscher, simon.limage@mail.house.gov

Supervisor Scott Haggerty, chris.gray@acgov.org

 **Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement**  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**  
Must be received on or before May 27, 2004.

Submitted By Annie Griffin: PO Box 5115 Waterbury, Ct 06942

1/31.01 none of the 3 options are acceptable to me.

2/25.06 Lawrence Livermore Labs is famous for "misaps" none of which have been critically reviewed or addressed so they may not happen again. The blatant mistruths about accidents, leaks etc show how integrity (an imperative when dealing with nuclear weapons) is completely lacking.

3/23.02 The annual of "risk assessments" due to radiation exposure is an insult to all of our intelligence! How can anyone determine who got cancer from a radioactive particle? It's impossible unless each person, who died of a cancer was biopsied and radioactive particles found.

4/01.01 the rest of the world distrusts our government and I believe and feel intuitively that much of the world is secretly guiding itself against

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

Griffin, Annie  
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Griffin, Annie  
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4/01.01  
cont. our growing threat. Sending a message we can control you can disarm" is not one we should carry.

5/07.01  
LAWRENCE LIVERMORE LAB SHOULD adopt a peaceful work solution. How to get rid of plutonium or store it safely.

6/08.01  
Article 1  
Therefore I submit "managing the US nuclear weapons stockpile" P.37 The curatorship option. As the only way to keep the balance of the weapons we have and the going forward of "disarming ourselves and the rest of the world... together there are better ways of doing things

3/23.02  
cont. Always. I submit information on spills, vents of radioactive material, mistakes, mishaps. Dr. Copmans comments, a letter from a renowned Dr. John Rasmussen a Los Alamos Lab nuclear scientist. Please address the following:  
So. 1) How can you say that a people will get cancer due to released radiation. What documents your conclusions? How many cancer victims have you assessed and interviewed? How many biopsies have you examined for radioactive particles, in millions?  
2) How do you explain the huge rise in cancer since the advent of nuclear power? (Source: American Cancer Society)  
3) you mention in EIR that a probability of accident is "once in a million years" when in fact since the advent of nuclear power have already been over 1000s of accidents, reported and unreported.  
See Time magazine article October 31, 1985

2/25.06  
cont.

P3 continued - Annie Griffin - PO Box 545 - Monterey, CA 93942



Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration



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7/07.01  
4) Instead of researching deadly bugs and germs we need the lab to develop an effective "tank tank" to find answers to a peaceful co-existence with our world community. The old adage we can get more bees with honey than vinegar still stands. If we must have weapons to protect ourselves why not work on nerve gases that temporarily put people to sleep until our mission is accomplished. Klugeans weapons that don't mangle or kill or pollute that is something that we can create just as you've <sup>seemingly</sup> here created these monstrosities that do ~~kill~~ mangle, kill and pollute. So my question is... what alternatives to lessen the threat of world hatred towards the US if being locked at border of the 3 options given to us in the draft EIS.

8/25.06  
5) The accident assessments are sorely lacking. What happens if a terrorist attack happens at the  
Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

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14  
Lawrence Livermore Lab? what will be the consequences of plutonium windstod? what evacuation procedures, displacements of people in homes forever. what any of the government will pay for the re-location of families that survive? what is the emergency procedures going to be? Who will pay for the health costs?

8/25.06 cont.

6) How will the furthering of nuclear testing affect the rest of the world? what can we expect in terms of other countries trying to catch our race? What impact will this have on the environment world wide?

9/01.01

7) How will your children be affected?

10/23.01

8) Please explain how your study compares with previous findings that links between ~~leakage~~ & nuclear reactors are so different in research - (look to Research article summary, ~~summary~~ ~~summary~~)

Article 3  
11/23.03

9) How are you going to contain the nuclear waste at Savannah storage facilities during floods? Already millions of pounds of radioactive waste has gone into rivers & underground caverns.

Article 2  
12/33.01

10) In the past the DOE has been notorious in concealing accidents (see article on concealing accidents) How are you going to assure the people this won't continue

Article 4  
13/25.06

-----Original Message-----  
From: John Guffey [mailto:yguffey@es@livermoreschool.org]  
Sent: Friday, May 07, 2004 7:15 AM  
To: tom.grim@oak.doe.gov  
Subject: Planned increase of nuclear activities

Dear Mr. Grim,

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

1/02.01

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

2/08.02

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

3/27.01, 33.01

3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for

4/26.01, 26.03

Guffey, John  
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4/26.01, 26.03	a close out of the NIF project and termination of plans to use plutonium and other new materials in it.
cont.	4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF).
5/37.01	The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.
6/39.01	5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.
7/35.01	6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.
8/04.01	I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.
9/07.01	Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in

9/07.01 cont.	Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.
	Sincerely,
	John Guffey P.O. Box 1770 Estes Park, Colorado

Hamlett, Catherine  
Page 1 of 1

Hamstring, Vance  
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Mr Tom Geim  
DOE - NNSA - L293  
7000 East Avenue  
Livermore, Calif. 94550

Dear Mr. Geim:

I must say that your last name is indicative of many of our fears of the activities at the Livermore Lab. The Environmental Impact Statement is simply frightening. Plutonium bomb cores? Biological weapons? Have we lost our minds? I ask you to consider the costs in human terms, as well as environmental and moral ones. I have written this by hand, rather than word-process, to emphasize the sincerity of my concern.

Sincerely,  
Catherine Hamlett.

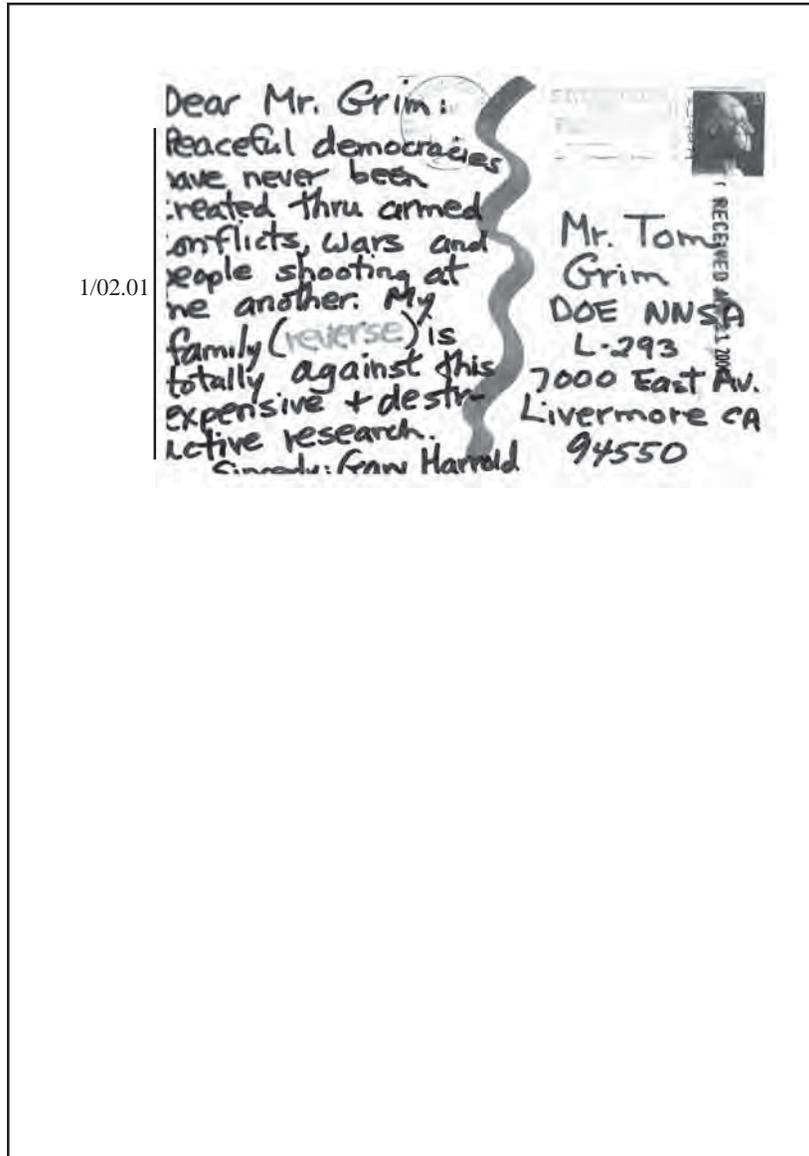
1/04.01

STOP the environmental impact statement on Livermore Lab's planned ops for the next ten years. This plan will double plutonium limit at labs, as well as enable production of 150-450 bombs. Aswell as do other nasty stuff.

Thanks  
Vance Hamstring

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Hartono, Carmen  
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Heffernan, Betty  
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CARMEN HARTONO - ROMAN CATHOLIC - OAKLAND DIOCESE



Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**  
Must be received on or before May 27, 2004

1/04.01 I'm here for my aunt who is a physics professor at Eastern University in El Salvador AND for my husband who is a ~~Vietnam Vet~~ Also for a friend who once was a mathematician at NASA. ~~She~~ <sup>friend</sup> ~~thought~~ <sup>thought</sup> she was developing a formula for a rocket to Mars. A few later she found she helped develop the first ballistic missile. Betrayed by her country she became a ~~refugee~~ <sup>refugee</sup> sister. My husband was betrayed by the U.S. allowing Israeli jets to invade the US Liberty so Israel could develop nuclear weapons. The aunt believes in democracy and supports the FMLN. Atley Spain started a socialist candidate Mr. US send notice to El Salvador to relocate the Bush because candidate with memories of 70,000 people killed last time El Salvador disagreed with the U.S. the Bush regime were ~~to~~ <sup>to</sup> ~~shame~~ <sup>shame</sup> ~~in~~ <sup>in</sup> ~~the~~ <sup>the</sup> ~~country~~ <sup>country</sup> ~~of~~ <sup>of</sup> ~~the~~ <sup>the</sup> ~~U.S.~~ <sup>U.S.</sup> ~~Scientists~~ <sup>Scientists</sup> ~~in~~ <sup>in</sup> ~~Germany~~ <sup>Germany</sup> ~~were~~ <sup>were</sup> ~~used~~ <sup>used</sup> ~~for~~ <sup>for</sup> ~~Nasa~~ <sup>Nasa</sup> ~~subsidies~~ <sup>subsidies</sup> with respect to ask all government employees to think of how they are being used to support an imperial power that is oppressing the world.

Make use of other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1176

*Antleung*  
Economic Security

31601 Medinah St.,  
Hayward, Ca. 94544  
April 24, 2004

U. S. Department of Energy  
National Nuclear Security Administration  
Livermore Site Office  
7000 East Avenue  
Livermore, Ca. 94550

Attn: Tom Grim, Document Manager, L-293

Gentlemen:

1/02.01 I wish to express my objections to the nuclear weapons to be manufactured and held at the Livermore, and stored at the Nevada test site.

1/02.01 It is incongruous that the United States can express violent objections and even go to war at the possibility that there are weapons of mass destruction in Iraq and complain about the nuclear weapons in North Korea, and then prepare to lay out a full buffet of new programs to be implemented at the Livermore Lab, all concerned with the manufacture and storage of nuclear weapons.

2/03.01 I beg you to consider the moral points of this program when there are so many starving people in the world which would be vastly helped by the money spent on weapons of mass destruction, as well as the health of the people in the area.

Please give this your earnest consideration.

Sincerely yours,  
*Mrs. Betty Heffernan*



Houston, Betty S.  
Page 1 of 2

Houston, Betty S.  
Page 2 of 2

838 Lake Blvd.  
Davis, CA 95616  
May 22, 2004

Mr. Tom Grim  
Department of Energy, NNSA, L-293  
7000 East Ave.  
Livermore, CA 94550

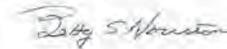
Dear Mr. Grim:

- 1/04.01 | I object to the Department of Energy's plan to double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. I object to the making of any more nuclear bombs at Livermore Lab. I object to a project called Plutonium—Atomic Vapor Laser Isotope Separation. This is a health risk and a nuclear proliferation nightmare.
- 2/37.01 | I object to the Livermore Lab being used as a place to produce plutonium pits for nuclear weapons. As planned the Modern Pit Facility could produce 150-450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year.
- 3/26.01, 26.03 | This plan will add Plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility megalaser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment.
- 4/26.04 | This plan will allow the manufacture of Tritium Targets for the NIF megalaser on site at Livermore Lab. Livermore Lab has a history of tritium accidents, spills and releases.
- 5/39.01 | This plan also call for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground Nuclear Tests. There should be no more testing of nuclear weapons.
- 6/01.02 | This plan proposes genetic modification and aerosolization with live anthrax, plague and other deadly pathogens. This could weaken the

6/01.02 | international biological weapons treaty—and it poses a risk to workers, the  
cont. | public and the environment in the Bay Area.  
7/35.01 |

The plan of the Department of Energy should be stopped.

Sincerely,



Betty S. Houston

Hudson, Jackie  
Page 1 of 1

Huntoon, Siri  
Page 1 of 1

May 15, 2004

Tom Grim  
Document Manager  
NNSA Livermore Site Office, L-293  
7000 East Ave.  
Livermore, CA 94550-9234

Comments on the SWEIS for the Lawrence Livermore National Laboratory for the next ten years:

- 1/01.01 I have followed the activities and development of the Lawrence Livermore National Laboratory (LLNL) for several years. The present plan of the U.S. Government for the next ten years is not only appalling but is in defiance of the U.S. Constitution, Article VI; Section 2:  
"...all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land;..."  
Any plan to expand the U.S. nuclear arsenal through experimentation and manufacture of required parts (plutonium pits) is not only further endangering civilization as we now know it but is illegal by Treaties signed and ratified by the U.S. Government.
- 2/23.04 Has this Government even begun to compensate workers suffering the ill effects of their labor at LLNL? Why would they want to endanger additional workers or the surrounding environment?
- 3/07.03 For the sake of humanity, I urge the U.S. Government to close this facility and clean-up the present contamination with the funds sought for this ten year plan.

Sincerely,



Sister Jackie Hudson, OP  
# 08808-039  
Federal Prisoner of Conscience  
Federal Prison Camp, Victorville, CA  
PO Box 5100  
Adelanto, CA 92301

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

From: sirihuntoon [mailto:sirihuntoon@earthlink.net]  
Sent: Sunday, May 09, 2004 3:24 PM  
To: tom.grim@oak.doe.gov  
Subject: Environmental Impact Statement

Dear Mr. Grim,

I live in Mountain View, on the peninsula, with my two boys aged 7 and 2, and my husband. We live near Moffet Field. My parents live in Stockton, and have become concerned about the radiation levels at Livermore Lab. They forwarded me the information about the proposed expansion of Livermore Lab from Tri-Valley Cares which I found distressing to read. I don't know what's worse - the plans to build 900 atomic bomb cores, or the biowarfare plans.

1/04.01

Words fail me. Our country has gone down the wrong road. These plans for the expansion at Livermore Lab send us even farther down the terrible path which leads only to more violence, destruction and death.

The normal functioning of government is becoming surreal: an environmental impact statement for the manufacture of 900 plutonium bomb cores?

2/07.01

Help us wake up from this living nightmare. Convert Livermore Lab into a research facility for alternative forms of energy. Humanity has had enough of violence, destruction, death.

With best wishes,

Siri Huntoon

Illegible Name  
Page 1 of 1

Intrator, Joan  
Page 1 of 2

1/01.01

2/04.01

3/07.01

April 20, 2004

Tom Grim  
DOE, NNSA L-293  
7000 East Ave  
Livermore, CA 94550

Dear Mr. Grim:

Since I cannot attend the public hearings in Livermore and Tracy (or in Washington, D.C.) April 27-28 MSP, I am sending a written comment re: Livermore Lab:

- 1/33.01 | 1. I oppose the proposal to up the plutonium limit at Livermore - we don't need more nuclear bombs. We must reduce what we have.
- 2/01.03 | 2. I am against reviving the once cancelled plutonium atomic isotope separation project. This would be a 3-fold increase, and a great health risk - "no" to this nightmare
- 3/27.01 | 3. Livermore Lab should NOT be used to test new technologies for producing plutonium pits. We should not be producing more bomb cores at all.
- 4/37.01 | 4. Adding plutonium, enriched uranium and lithium hydride to work in the National Ignition Facility megalaaser must be stopped. NIF would become even more hazardous to the environment, neighborhood, and facility workers.

[04-25]

Intrator, Joan  
Page 2 of 2

Ipsen, Avaren  
Page 1 of 2

6/39.01

5. Oppose any plan to resume under-ground nuclear tests.

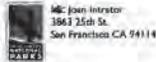
7/35.01

8/01.02

6. Mixing pathogens and nuclear weapons at Livermore Lab is a terrible plan - this path everyone in the Bay Area is right. I oppose turning Livermore into a bio-weapon agent facility. What would happen to the international biological weapons treaty intended to eliminate these horrible killers?

Please register my comments as part of your public input.

*Joan Intrator*



Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**

*Must be received on or before May 27, 2004.*

HELLO, MY NAME IS AVARON IPSEN, I LIVE & WORK IN BERKELEY, WITHIN THE FALL OUT RADIUS IF THERE IS EVER A CATASTROPHIC ACCIDENT OR TERRORIST ATTACK HERE IN LIVERMORE I AM A PH.D CANDIDATE IN BIBLICAL LITERATURE AT THE GTU. AND A LECTURER AT UC BERKELEY. I FEEL IT IS MY DUTY TO CRITICIZE MY EMPLOYER, UCB, WHO MANAGES THE LAB - THUS I HAVE JOINED THE COALITION TO DEMILITARIZE EDUCATION. I SPECIALIZE IN ESCHATOLOGICAL TEXTS OF THE BIBLE - SUCH AS THE BOOK OF REVELATION. I ESCHATOLOGY IS THE STUDY OF THE END. I AM AN EXPERT ON BIBLICAL ALMSGEDDON & THE ERA I GREW UP IN, THE 60'S & 70'S WAS SATURATED WITH APOCALYPTIC, END OF THE WORLD, DOOMSDAY SCENARIOS, SUCH AS IN FILMS THAT TERRIFIED ME LIKE PLANET OF THE APES, ON THE BEACH, OMEGA MAN, THE LAST MAN ON EARTH, SOLYENT GREEN,

Comment forms may be mailed to:  
Mr. Tom Grimm  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-295  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grimm  
(925) 422-1776



J., Shelby  
Page 1 of 2

J., Shelby  
Page 2 of 2

 **Draft Site-wide Environmental Impact Statement**  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**  
*Must be received on or before May 27, 2004.*

To = Decision Makers -  
concerning these issues  
From = Shelby J  
Former Treasurer of  
Sacramento Peace Action

Thank you - for this  
chance for dialogue;  
Congratulations on your  
devotion to scientific matters  
- I myself received 3rd  
place in our midwestern  
Science Fair

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

I echo the call for  
"environmental justice!"

**Jackson, Janet F.**  
**Page 1 of 1**

**Joan**  
**Page 1 of 1**

-----Original Message-----  
 From: janet f jackson [mailto:janslot@sonic.net]  
 Sent: Tuesday, April 27, 2004 3:01 PM  
 To: tom.grim@oak.doe.gov  
 Subject: Nuclear Weapons

1/04.01 | I am very disturbed that our Congress has allowed the Bush administration to step up the  
 building of nuclear weapons. The danger of nuclear proliferation is well known, and any  
 threats to our country surely do not justify the blatant waste of tax revenues for such an  
 endeavor. It is an absurd twist of logic to argue that we will be safer with increased  
 2/01.01 | nuclear weapon buildup.  
 Please take my comments to heart. sincerely, Janet F.  
 Jackson  
 2301 Silk Rd.  
 Windsor, CA  
 95492

From: "joan peace" <lifeissacred2004@yahoo.com>  
 To: tom.grim@oak.doe.gov  
 Subject: Please care about the health of the world  
 Date: Fri, 28 May 2004 11:07:28 -0700

Hello,  
 I am writing you with the hope that you will consider the health of all of the plants, animals  
 (including humans), and Earth itself, now and for future generations, in your decision-making.  
 There is nothing safe about nuclear anything, ever. I beg of you to please, please, please,  
 consider this as you make your decisions. I personally would like to one day bring a child into this  
 world and there is already so much nuclear activity to clean up.  
 Thank you, in peace, Joan

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

Judge, Jane  
Page 1 of 1

Junell, Greg  
Page 1 of 1

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

**From:** Jancejudge@aol.com [mailto:Jancejudge@aol.com]  
**Sent:** Thursday, May 06, 2004 5:18 AM  
**To:** tom.grim@oak.doe.gov  
**Subject:** No Doe Plan

Let's stop the insanity now. Otherwise, world destruction.

Jane Judge

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

Greg Junell  
752 Islay  
San Luis Obispo, Ca 93401

May 18, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Re: LLNL Should Work for Peaceful Purposes

Dear Mr. Grim:

1/02.01 | I oppose the development of nuclear weapons at LLNL. Please consider that the best interest of the people of the world and the citizens of the United States is peace.

Peace does not come from weapons. Peace comes from communication.

2/07.01 | The best use of the excellent facilities and fine minds at LLNL is for civilian R&D, declassified projects and peaceful endeavors.

Most Sincerely,



Greg Junell

Kate-Turner, Janis  
Page 1 of 2

May 25, 2004

To: Thomas Grem, Document Manager  
US Dept of Energy

Dear Mr. Grem:

I live less than 1 mile from LLNL main site. I am very concerned about the proposed increase of on-site storage & use of plutonium (from current limit of 1,546 lbs to an allowable 3,700 lbs), as stated in the recently released SWEIS, which outlines operations for LLNL and Site 300 over the next 10 years.

The use of plutonium in fission & vaporizing experiments as planned at the National Ignition Facility, is irresponsible in the midst of a tightly packed residential community.

Testing by an independent contractor (TRAC lab out of Belfair, Va.) reports nuclear by-products of fission deponing and downstream from LLNL main site: Strontium 90, Americium 241, Cesium 237. I live downstream near Arroyo Seco and Big Trees Park, where elevated levels of plutonium have been reported. Thank you,

1/33.01  
2/26.01  
3/24.04  
4/23.01

Kate-Turner, Janis  
Page 2 of 2

4/23.01 cont. "What will be done to protect my neighborhood from further nuclear contamination in the face of proposed acceleration of experiments with nuclear elements?"

5/33.01 Next Jack, "How will the used plutonium & nuclear by-products be disposed of? Currently, no facility is able and willing to receive LLNL radioactive wastes; do you have a plan for repository other than storage at LLNL?"

Please respond to my questions and concerns.

Respectfully,  
Janis Kate-Turner (JKT)  
749 Hazel St  
Livermore, Ca  
94550

**Katz, Joanna**  
 Page 1 of 1

**Kendrick, Daniel**  
 Page 1 of 2

-----Original Message-----  
 From: Joanna Katz [mailto:jbkatz@lmi.net]  
 Sent: Tuesday, May 04, 2004 4:11 PM  
 To: tom.grim@oak.doe.gov  
 Subject: Livermore Lab

- 1/37.01 | It would be a disaster to revive the manufacture of nuclear weapons at Livermore.
- 2/22.02 | 1) With any use of nuclear anything there is a huge problem of how to dispose of the waste. If this does not immediately impact us, it will eventually destroy us as the waste accumulates and it becomes harder and harder to find safe storage for the deadly stuff.
- 3/02.01 | 2) Building nuclear weapons of any kind is not where we want to put our resources. We approach conflict with diplomacy and negotiation, not with the mentality of who can be the most destructive.
- 4/30.01 | 3) With the manufacture of more nuclear weapons, Livermore would become a perfect target for a terrorist attack.
- 5/07.01 | Research and planning should be going into cleaning up Livermore, and making it a resource for peaceful purposes.

Joanna Katz, Berkeley  
 --

From: "Daniel Kendrick" <dikeck@ix.netcom.com>  
 To: "Mr. Tom Grim" <tom.grim@oak.doe.gov>  
 Subject: My comments on new programs being proposed at Livermore Lab  
 Date: Sat, 22 May 2004 22:08:54 -0700

Daniel Kendrick  
 4274 Fairlands Dr  
 Pleasanton, CA 94568

May 23, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave  
 Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

I moved to the Tri-Valley area about 10 years ago. My children attended school in Livermore and Pleasanton.

I have some comments about Department of Energy's Site-Wide Environmental Impact Statement for continued Operations at Lawrence Livermore National Laboratory (LLNL). I attended the public hearings on the subject held on April 27, 2004 in Livermore, but did not speak on them.

Here are my concerns:

- 1/30.01 | 1. In many cases over the last few years, a policies have been established based on incorrect and overlooked data. For examples of this, consider the administration's denial of global warming, starting a war in Iraq based on a threat of weapons that in fact did not exist. There are many other examples, although I don't have any from the Department of Energy. My concern is that the Environmental Impact statement and the plan for new projects at the Livermore lab are based on a political agenda and not on scientific facts. The risk assessments do not take into account the risk of terrorist attacks. But the lab would be an obvious target if new nuclear weapons were being developed there.
- 2/22.02 | 2. Over the last 60 years, we still don't know what to do with nuclear waste. We must not produce more of it until we know what to do with it. Neither storing the waste in Livermore nor transporting it out of Livermore is an acceptable option.
- 3/07.01 | 3. It is truly an asset to our community to have leading scientists doing work here. We need projects worthy of their attention. One such project would be to develop a better plan for dealing with nuclear waste than to bury it and hope for 10,000 years of good luck. Another issue of utmost importance is to develop safe, sustainable energy sources.

Here are my questions:

- 4/25.06 | 1. Which prominent scientists on the LLNL staff approved the risk assessments? Did any senior staff dissent from the assessments?

**Kendrick, Daniel**

Page 2 of 2

5/31.01 | 2. Did senior technical staff at LLNL make alternative proposals for the lab's work over the next few years? What were those proposals and what happened to them?

6/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

7/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,  
Daniel Kendrick

**Kent, Stephen**

Page 1 of 3

Stephen Kent  
Box 431  
Garrison, NY 10524

May 27, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/04.01 | I oppose the draft Site Wide Environmental Impact Statement (SWEIS) that proposes to vastly expand nuclear weapons activities at the Livermore National Labs. I reject it on the grounds the new functions it envisions are destabilizing, are illegal under duly ratified treaties, and put public health and the environment at risk.

Don't think the public doesn't understand or doesn't care about the implications of the precipitous swerve of the Bush administration towards an aggressive and illegal nuclear posture. The community of nations and Americans living downwind of the nuclear complex are capable of recognizing it for what it is, and seeing their interest in opposing and denouncing it. As one of them, I oppose SWEIS and denounce the mentality within DOE that produced it.

When will the US government cease seeking false security from ever greater reliance on nuclear weapons, at the cost of ever greater repression of the rights, values and wishes of citizens at home and stimulation of hatred for the US and WMD proliferation abroad? I have no illusions DOE will change course no matter what the public says; recent history is clear on the matter of how administrations ignore public opinion on nuclear issues. But they do so at their peril, and cannot long retain public support by ignoring deeply felt public opinion. Implementing the SWEIS proposal can only deepen public disaffection and exacerbate DOE's credibility gap.

Specifically:

2/01.01 | The so-called "Robust Nuclear Earth Penetrator," so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab are a violation of US treaty commitments including the Nuclear

**Kent, Stephen**  
**Page 2 of 3**

2/01.01 cont.	Non-Proliferation Treaty, signed and ratified by the US and the law of the land.
3/30.01	As recently highlighted by congressional hearings, the labs can't even safeguard their existing nuclear materials from terrorist attacks, let alone doubling and tripling the quantities stored there.
4/27.01	The Plutonium Atomic Vapor Laser Isotope Separation (AVLIS) planned for LLNL will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The US stated categorically to the 1995 NPT review conference it would not embark on such a project. Doing so will further undermine US credibility with nuclear weapons states and non-weapons states alike, already at a dangerous low.
5/26.01, 26.03	Dangerous New Experiments in the National Ignition Facility Mega-Laser will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for developing new generation nuclear weapons designs, an abrogation of NPT treaty commitments. It is part of an enabling technology structure for offense nuclear powered lasers including destabilizing space weapons envisioned in US strategic documents. It will also make the NIF more hazardous to workers and the environment.
6/37.01	SWEIS proposes to make Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year, signalling our intentions despite the NPT and the recent Moscow Treaty to retain and even build on our huge Cold War era arsenals and rely on nuclear hegemony -- a strategy which betrays utter failure to draw the lessons of history.
7/39.01	SWEIS calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing which will destabilize the world and cause environmental and public health damage.
8/35.01	Plans for collocating an advanced weaponized bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab entail genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could

**Kent, Stephen**  
**Page 3 of 3**

8/35.01 cont.	weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment.
1/04.01 CONT.	The DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate nuclear danger Americans face while putting the public and the environment at needless risk at a time when the threat environment is already acute. Don't pretend a limited public comment period legitimizes it, as if it is being done in the name of or for the benefit of citizens, or with their tacit consent. If it happens, it will have been forced down our throats, like much else this DOE and this administration has already done.
	Sincerely,
	Stephen Kent

Labriola, Kathy  
Page 1 of 1

7/25/04

Dear Mr. Grim,

I am writing to object to the Dept of Energy recently released SWEIS (Site-Wide Environmental Impact Statement for Livermore Lab's planned operations for the next 10 years.

I am outraged that the SWEIS calls for doubling the amount of plutonium allowed for Livermore Lab from 1540 pounds to 3300 pounds! One microscopic particle of plutonium, if inhaled, can cause lung cancer. And just a few pounds of plutonium can make more than 300 nuclear bombs.

In addition, the SWEIS plan makes Livermore Lab the primary test site for new technologies for manufacturing plutonium pits for nuclear weapons. A "plutonium pit" is a soft ball-sized piece of plutonium that fits inside a nuclear weapon + triggers the atom's nuclear explosion. This is a threat to the health + safety of all of us living in the Bay Area, as well as a horrible danger to the world due to the creation of ~~so~~ many additional nuclear weapons.

Just but not least, the SWEIS calls for Livermore to be the center of development of a new round of underground nuclear testing. This is a danger to health as well as to world peace.

Please oppose this terribly misguided + dangerous SWEIS.

Sincerely,  
Kathy Labriola  
Kathy Labriola  
1-14 - 9th Street  
Berkeley, CA 94710

1/04.01

2/33.01

3/37.01

4/23.01

5/39.01

1/04.01  
cont.

Lang, Michael  
Page 1 of 1

OEA District Office  
Berkeley, California  
74740-8324  
May 26<sup>th</sup> 2004

Thomas Grim, SWEIS Document Manager  
U.S. Dept. of Energy  
National Nuclear Security Administration  
Licensing Office  
7000 Rockwood  
Livermore, California 94550-9254  
tel: (925) 723-4424 ext. 7776

Dear Mr. Grim,

1/03.01 | The U.S. is already spending more than a billion dollars every 24 hours on defense.

2/07.01 | I urge the Lawrence Livermore National Laboratory to devote its resources to developing the peaceful use of the atom.

Sincerely,  
MICHAEL LANG

cc: James Abraham, Secretary, Dept. of Energy  
Michael Abraham, Director, Lawrence Livermore Lab  
Debra Lee, U.S. Representative  
Debra June, U.S. Senator

The above text reads as follows:

The U.S. is already spending more than a billion dollars every 24 hours on defense.

I urge the Lawrence Livermore National Laboratory to devote its resources to developing the peaceful use of the atom.

**Larkin, Don**  
Page 1 of 4

**Larkin, Don**  
Page 2 of 4

**Comments on the Draft Environmental Impact Statement for Lawrence Livermore National Laboratory**

Don Larkin  
May 27, 2004

Ongoing and proposed activities at the Lawrence Livermore National Laboratory have an environmental impact far beyond the immediate vicinity of Livermore.

An honest assessment of that impact must take into account at least:

1/01.01

- How weapons research and development at the lab affects the worldwide climate for nuclear weapons—in particular, how it affects the proliferation of nuclear weapons. (Some specific comments on this point are included below.)
- How the products that begin their life at the lab will affect the environment in which we live.

2/02.01

The intention, of course, is to produce a new generation of nuclear weapons, including so-called “bunker busters” and “mini-nukes.” It’s clear that the government intends these weapons to be more “usable” than the ones currently in the arsenal. Their use is inherent in the missions for which they’re being designed and the design requirements. For instance, the whole idea behind developing weapons with smaller yields is that it reduces one of the barriers to their use.

Therefore, the likely environmental effects of these weapons in use must be included as part of the study.

3/31.04

The draft environmental impact statement omits these concerns and, therefore, is flawed. It should be redone to address these concerns. Or separate studies with public comment should be initiated to address them. No action should be taken until those studies are complete.

**Proliferation**

Research and development on nuclear weapons is the engine that drives proliferation. It’s where proliferation begins.

There are several reasons why this is the case:

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CONT.

- First, and most obviously, without weapons R&D there would be nothing to proliferate. The technologies that we fear others may acquire and use against us are invented at the Lawrence Livermore National Laboratory. It all begins here.

Some people say that if the United States didn’t work on advancing nuclear weapons technology, others would and this country would fall behind. This is patently false. No other country has the inclination or the money to do this work. If the U.S. didn’t do it, it wouldn’t get done—and the world would be safer, now and in the future. We cannot use others as an excuse.

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- Moreover, weapons R&D legitimizes the possession of nuclear weapons. If it makes sense and is morally acceptable for the United States to develop these devices, then it makes sense and is morally acceptable for others to do the same.

Current weapons R&D also legitimizes the use of nuclear weapons—especially given that the intention is to design more “usable” weapons and weapons tailored for specific, foreseeable functions, such as destroying underground bunkers.

- Weapons R&D creates curiosity and anxiety: Others wonder what you have learned and what you are inventing based on that knowledge. They engage in activities to compensate for the possibilities.

Lately, the idea has been floating around that if the US just maintains overwhelming force, others will see how futile anything their poor societies might do to stand against us would be—and they won’t try. The Nuclear Posture Review calls this “dissuasion” and says that “[t]he capacity . . . to upgrade existing weapons systems, surge production of weapons, or develop and field entirely new systems . . . can discourage other countries from competing militarily with the United States.” Our might prevails because others know it is hopeless to stand against us. They give up without a fight.

This is an idea grounded only in wishful thinking and thoughts of global empire. Nothing in history backs it up. Others may change their behavior in response to our armaments, but it is not to get rid of their own weapons, but to enhance them to counter ours.

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CONT.

- Weapons R&D also undermines the Non-Proliferation Treaty (NPT). That treaty obliges countries without nuclear weapons to forego acquiring them. In return, countries with nuclear weapons promise to negotiate the means they will use to get rid of them. Article VI of the treaty requires “negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.”

If the United States continues to violate that article, other nations will not feel bound by their promise not to acquire nuclear weapons.

In sum, the research and development of nuclear weapons in the U.S. models and initiates the processes that lead to proliferation.

All technology proliferates—perhaps especially weapons technology, since its pursuit is motivated both by fear and dreams of power. Proliferation doesn’t require espionage—though that occurs. Sooner or later, others figure out what you have done and retrace your steps. They note the direction of nonclassified research that might be informed by classified research. They see what hypotheses are being tested and which avenues are no longer being pursued. They discern what direction the technology is moving, they see the activity that surrounds what you’re trying to keep secret, and they draw conclusions.

After the first atomic bombs were developed in 1945, scientists in the Manhattan project predicted that the Soviet Union would duplicate that feat within 5 or 6 years. They were close. Fifty-nine years later, the technology for fission bombs is widely understood and the world is awash in plutonium. We now worry about nuclear bombs in suitcases and car trunks, put there not by

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cont.

countries, but by nongovernmental groups like Al-Qaeda. Did anyone predict this in 1945? How long do lab scientists think it will take for this history (or something paralleling it) to be repeated for their current inventions? When do they think the technology behind the next generation of nuclear weapons will be commonplace?

Once a technology is invented, others can duplicate it with much less effort and for a small fraction of the original cost—for you will have found the path and paved the way for them. Does it make sense for the United States to devote so much of its talent and so many of its resources to develop these extremely dangerous, terrible technologies that will eventually, in time, target our grandchildren?

You can't fight terror with war and new weapons—especially weapons of terror like those designed at Lawrence Livermore National Laboratory.

And you can't end proliferation by creating more weapons to proliferate.

**Proliferation Study**

In 1995, the Department of Energy conducted hearings on whether the centerpiece of the Stockpile Stewardship program, the National Ignition Facility (NIF), posed a proliferation risk. The final report, titled "The National Ignition Facility and the Issue of Proliferation," came out in December of that year. Predictably, it concluded that NIF would not contribute to proliferation. It rested that conclusion on two main assertions:

- First, that the labs were not pursuing and NIF would not be used to pursue new weapons designs or advanced weapons concepts.

If that was ever the case, it clearly isn't any longer. In contrast to 1995, the government has been very public about its intent to develop another generation of nuclear weapons. For example, the Nuclear Posture Review of December 2001 talks about the need to "design, develop, manufacture, and certify new warheads in response to new national requirements" (p. 30) and speaks of the hope that "it will not take 20 years or more to field new generations of weapon systems," including nuclear weapons (foreword).

- Second, that the Comprehensive Test Ban Treaty would be in place to prevent test explosions; and that test explosions were needed to actually verify a new design. In fact, the report claimed that the experiments at NIF would contribute to the test ban by making it possible to monitor the stockpile without testing. NIF made the test ban more acceptable to the nuclear weapons establishment.

However, we now have the experience of warheads being designed without test explosions. Moreover, the United States has refused to ratify the Test Ban Treaty and the Nuclear Posture Review entertains the possibility of resuming full-scale underground testing (i.e., more than the "subcritical" tests now taking place).

Thus, the main pillars upon which the claim that NIF would not contribute to proliferation rested—extremely shaky pillars to begin with—have now collapsed. Other parts of the edifice have also crumbled. For example, the report asserted that openness at the lab would mitigate

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against others being concerned about what the U.S. was up to. And it said that plutonium would not be used in NIF experiments. Neither assertion is valid today.

Therefore, the claim that activities at the lab won't contribute to proliferation no longer can be maintained. It is imperative that the issue of proliferation again be reopened in a comprehensive way—with public comment and independent analysis. This time, the study should concern not just NIF, but all ongoing and proposed activities at the lab.

We need more than just an assertion from the government that NIF experimentation and the lab enhancements won't contribute to proliferation (or, in the words of the 1995 study, that "proliferation concerns . . . can be successfully managed"). We need evidence, analysis, and argumentation. We need a comprehensive study and public input. We need independent evaluators. In the end, we need an explanation of why the technology developed at the lab is the exception to rule that all technology proliferates.

**Risk Assessments**

The past history of the laboratory shows that the optimistic risk assessments in the draft environmental impact statement are inaccurate and not to be believed. There are a number of reasons for the inaccuracies, including faulty initial assumptions about the probabilities of various events. Garbage in, garbage out.

A core problem is that aggregate and contingent risks are not appropriately taken into account. Suppose, for example, that three things (X, Y, and Z) must go wrong for, say, the release of radioactive material during particular kinds of experiments. The EIS assumes that the probability of the release is the product of the separate probabilities for X, Y, and Z occurring at the same time. Since X, Y, and Z each have low probabilities, the probability of them happening in concert is, mathematically, determined to be extremely low indeed.

This reasoning fails to take into account contingencies between events. X affects the probability of Y and Z. For example, the heat of a fire (X) may make it more likely for a particular piece of equipment to fail (Y) or for a human actor to do something out of the ordinary (Z). Overlooked wear and tear on a part (X) may make a short circuit (Y) more probable along with the failure of other systems (Z). I have a steady hand, so the probability of my spilling orange juice as I pour it in the morning is perhaps 1 in 150 (I spill some about twice a year). However, during an earthquake that probability shoots up to close to 1 in 1. It would be totally misleading to assume that the probability of orange juice being spilled is 1/150 times the probability of an earthquake occurring at that time. Yet this is equivalent to the reasoning on risk assessments in the EIS.

In addition, human error—everything from ordinary mistakes to the determined actions of a disgruntled employee—is not adequately taken into account. Illness (such as a cold or even the lack of sleep) can make someone more error prone.

The risk assessments in the EIS need to be redone.

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Dear Mr. Grim,  
>  
> Please consider this letter with my comments on the environmental and  
> proliferation risks from proposed nuclear weapons development and new  
> plutonium and tritium programs at the U.S. Department of Energy's  
> (DOE) Lawrence Livermore National Laboratory (LLNL).  
>  
> I write to you because the DOE has prepared a draft Site Wide  
> Environmental Impact Statement (SWEIS) that proposes to ramp up  
> nuclear weapons activities at the Livermore Lab in Northern  
1/02.01 > California. Livermore Lab is working on the design of a new,  
> high-yield nuclear bunker-buster, called the "Robust Nuclear Earth  
> Penetrator," and I oppose its development. Additionally, I oppose the  
> development of so-called "mini-nukes" and other new nuclear weapons  
> concepts being researched at Livermore Lab.  
>  
> Here are my comments on six dangerous new programs being proposed at  
> Livermore Lab.  
>  
2/08.02 > 1. Storage of More Nuclear Materials: This plan will more than  
> double the storage limit for plutonium at Livermore Lab from 1,540  
> pounds to 3,300 pounds. It would increase the radioactive tritium  
> storage limit from 30 grams to 35 grams. I join California Peace  
> Action and the Livermore-based Tri-Valley CAREs group in calling on  
> DOE to de-inventory the plutonium and tritium stocks at Livermore Lab,  
> not increase them.  
>  
3/27.01, > 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This  
33.01 > plan will revive a project that was canceled more than 10 years ago  
> because it was dangerous and unnecessary. The project is Plutonium  
> AVLIS. This is a scheme to heat and vaporize plutonium and then shoot  
> multiple laser beams through the hot vapor to separate out plutonium  
> isotopes. To do this, Livermore Lab plans to increase the amount of  
> plutonium that can be used at one time in any one room from 44 pounds  
> to 132 pounds a 3-fold increase. I join California Peace Action and  
> the Livermore-based Tri-Valley CAREs in calling for cancellation of  
> this project.  
>  
4/26.01, > 3. Dangerous New Experiments in the National Ignition Facility  
26.03 > Mega-Laser: This plan will add plutonium, highly-enriched uranium and  
> lithium hydride to experiments in the National Ignition Facility (NIF)  
> mega-laser when it is completed at Livermore Lab. Using these  
> materials in the NIF will increase its usefulness for nuclear weapons  
> development. It will also make the NIF more hazardous to workers and  
> the environment. I join California Peace Action and the  
> Livermore-based Tri-Valley CAREs in calling for a close out of the NIF

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4/26.01, > project and termination of plans to use plutonium and other new  
26.03 > materials in it.  
>  
cont. > 4. New Technologies for Producing Plutonium Bomb Cores: This plan  
> makes Livermore Lab the place to test new manufacturing technologies  
> for producing plutonium pits for nuclear weapons. A pit is the  
> softball-sized piece of plutonium that sits inside a modern nuclear  
> weapon and triggers its thermonuclear explosion. DOE says these new  
> technologies will then be used in a new bomb core factory, called the  
5/37.01 > Modern Pit Facility (MPF). The Livermore Lab plutonium pit program  
> will enable the MPF and production of 150 - 450 plutonium bomb cores  
> annually, with the ability to run double shifts and produce 900 per  
> year. This production capability would approximate the combined  
> nuclear arsenals of France and China each year. I join California  
> Peace Action and the Livermore-based Tri-Valley CAREs in calling for  
> termination of this technology development project.  
>  
6/39.01 > 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This  
> plan calls for Livermore Lab to develop diagnostics to "enhance" the  
> nation's readiness to conduct full-scale underground nuclear tests at  
> the Nevada Test Site. This is a dangerous step back to the days of  
> unrestrained nuclear testing and I join with California Peace Action  
> and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to  
> conduct full-scale tests.  
>  
7/35.01 > 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at  
> Livermore Lab. It calls for collocating an advanced bio-warfare agent  
> research facility with nuclear weapons activities in a classified area  
> at Livermore Lab. The DOE proposes genetic modification and  
> aerosolization (spraying) with live anthrax, plague and other deadly  
> pathogens on site at LLNL. This could weaken the international  
> biological weapons treaty -- and it poses a risk to workers, the  
> public and the environment here in the California. Interestingly, this  
> program is listed as part of LLNL's "no action alternative" as though  
> it were an existing program -- even though it is not yet constructed,  
> Tri-Valley CAREs has brought litigation against it, and a federal  
> Judge has issued a "stay" prohibiting the importation of dangerous  
> pathogens into the facility while the lawsuit moves forward. I join  
> Tri-Valley CAREs in opposing the operation of a bio-warfare agent  
> facility at Livermore Lab.  
>  
8/04.01 > I believe the DOE plan to introduce new weapons programs into LLNL  
> will promote a new arms race and escalate the nuclear danger. Further,  
> the DOE proposal to double LLNL's plutonium storage limit to 3,300  
> pounds and triple the amount held "at risk" in any one room increases  
> the environmental threat LLNL poses to the people of California. The

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8/04.01 | > SWEIS propels Livermore Lab in exactly the wrong direction.  
 >  
 CONT. | > Instead of proposing new weapons projects, DOE should enhance the  
 > peaceful, civilian scientific capabilities and mission at Livermore  
 > Lab by proposing new, unclassified programs in environmental cleanup,  
 9/07.01 | > non-polluting and renewable energy, earth sciences, astrophysics,  
 > atmospheric physics and others. The alternative of a "green lab" in  
 > Livermore should be pursued instead of the dangerous nuclear weapons  
 > future proposed by the Site Wide Environmental Impact Statement.  
 >  
 > Sincerely,  
 >  
 > Name: Valerie Lasciak  
 >  
 > Address: 1555 Merrill St. 139  
 >  
 > State: CA 95062  
 >  
 >  
 > The Department of Energy has released a draft site-wide Environmental  
 > Impact Statement on Livermore Lab's planned operations for the coming  
 > t e n y e a r s . The law requires DOE to seek public input before  
 > moving forward. This is a once in a decade chance to make our voices  
 > heard.

**Lea, Meri**  
**Page 1 of 6**

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim,

I had the opportunity to attend the public comment hearing held April 27th at the Double Tree Club Hotel in Livermore.

It is ABSOLUTELY critical for our very human survival, as well as all other living beings that we share this planet with that the Bush administration's policy of developing even more dangerous nuclear and biological weapons be stopped!!

1/04.01 | The Lab is a leaky boat, built between 2 earthquake fault lines. There has already been leakage of nuclear materials into the immediate surrounding, including SF Bay. This information is a giant RED FLAG, don't you and the other commissioners think? And now it is being proposed that the lab handle twice as much plutonium and engage in the development of germ warfare programs.

Are you and your fellow commissioners concerned about this, for your self, your families, friends and all peoples of the world? How much longer do you think humanity has to survive? We have already changed our climate, polluted our vast oceans so much so that now even deep ocean water fish (swordfish) are too polluted to consume as food.

You and the other commissioners are in a position to require more control over the ecological threat that the weapons program at Lawrence Livermore Labs poses.

Thank you for your time and consideration of my comments.

I wholeheartedly support and stand with the other Americans who support the following letter:

2/31.04 | Through this letter we are expressing our deep concern with the health and environmental risks posed by the

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<p>2/31.04 cont.</p>	<p>expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:</p>
<p>3/08.02</p>	<p>1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.</p> <p>2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store</p>

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<p>3/08.02 cont.</p>	<p>safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.</p>
<p>4/34.01 5/33.01, 25.01</p>	<p>3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.</p>
<p>6/27.01</p>	<p>4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.</p>
<p>7/37.01</p>	<p>5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab</p>

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7/37.01 cont.	<p>plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.</p>
8/26.01 9/26.03	<p>6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.</p>
10/26.04	<p>7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation</p>

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10/26.04 cont.	<p>of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.</p>
11/39.01	<p>8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
12/35.01	<p>9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.</p>
13/14.01	<p>10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.</p>
14/22.01	<p>11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS</p>

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Livermore Chamber of Commerce, Jim Ott, Chairman  
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14/22.01  
cont. | says this is exempt from environmental review. This work in its entirety must be included in the review.

15/20.05 | 12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.

16/01.01 | 13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).

17/07.01 | Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.

The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.

Sincerely,  
  
Meri Lea  
merilea@yahoo.com

April 27, 2004

To: Tom Grin, NNSA  
Via email

From: Jim Ott  
Chairman, Livermore Chamber of Commerce

Subject: Livermore Chamber of Commerce perspective regarding the Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement

Summary Statement

The Livermore Chamber of Commerce supports the proposed actions of NNSA relative to operations of the Lawrence Livermore National Laboratory.

Statement

1/04.01 | While an ideal of humanity would be a world without nuclear weapons, we cannot un-invent these weapons. And while reduction of weapons and use of radioactive materials around the world and even here in the United States is an ideal worth pursuing, it is unrealistic at this time to curtail the research and important work of our national laboratories in ensuring the safety, maintenance, and efficiencies of our nuclear weapons stockpiles.

In this regard, we support the primary purpose of operations of LLNL, to provide support for the National Nuclear Security Administration's (NNSA's) nuclear weapons stockpile stewardship missions.

Lawrence Livermore National Laboratory is a premier science and research facility that has called Livermore home for more than 50 years. The lab is active in the city of Livermore and in the Tri-Valley region. Lab employees are involved in numerous civic and charitable organizations, as well as in our schools and local government.

2/15.01 | The Livermore Lab is the largest employer in the city of Livermore, with an annual budget of \$1.6 billion. Of its roughly 8500 employees, more than 3800 live in the Livermore Valley. This equates to some \$352 million in payroll earned by Livermore Valley residents—funds that find their way into our local businesses, into our schools, even into our arts community.

Along with payroll, our local and regional economy is also boosted by how the Lab buys things. In 2003, some \$153 million was spent on the purchase of goods and services here

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in the Bay Area. And this doesn't include the hundreds of millions of dollars that are invested into our state and national economy through the Lab's purchases.

Livermore's original purpose was national security. That remains its primary focus, but it has developed expertise in other science and research areas such as biology, chemistry, lasers, high-speed computers, studies of the environment, and improving human health. That science and research has aided our local business community through partnerships and collaborations:

- Livermore Lab's **Small Business Program Office** helps a variety of small businesses understand how to negotiate and enter into LLNL subcontracts. Firms that benefit from this assistance include disadvantaged businesses, woman-owned businesses, veteran-owned businesses, and others. The Lab participates in numerous small business related outreach efforts, which include:

- Small Business Administration (SBA)
- U.S. Army Corp of Engineers Veterans Small Business Conference
- Women's Business Enterprises National Conference
- California Hispanic Chamber of Commerce Conference
- California Black Chamber of Commerce Conference
- U.S. Department of Commerce, Minority Enterprise Development Week

- Livermore Lab's **supplier management program** includes a database of hundreds of small businesses from the local area as well as nationally. In support of DOE's policy to fully integrate small businesses into the DOE's core mission and programs, the Lab negotiates annual goals in proscribed socioeconomic categories. About \$220 million in annual procurements go to small firms such as those noted previously.

- Livermore Lab's **Industrial Partnerships and Commercialization (IPAC) Office** helps Laboratory programs enter into partnerships with industry and transfer Lab technology on behalf of the UC and the DOE. The Lab is a leading DOE lab in collaborating with small business receiving, and has won awards under the DOE Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs. Over 40 percent of its industrial partnerships are with small businesses and start-up companies.

Livermore Lab technologies have been utilized to establish a number of high-tech Bay Area companies, some of which are located in the East Bay. A few examples are PowerStor® Corporation in Dublin; Ocellus Technologies in Livermore; Cepheid in Sunnyvale; and MicroFluidic Systems, Inc. in Pleasanton.

Another successful technology transfer is with Metal Improvement Company, Inc. of New Jersey using the Lab's laser peening technology. In 1997, Metal Improvement, which is an established provider of conventional shot peening services to industry, entered into an agreement with Livermore Lab to develop a commercially viable laser

2/15.01  
cont.

peening process based on a high-energy and high-pulse rate laser. The collaboration was successful, and now metals can be laser peened effectively and economically, resulting in stronger metals. MIC has established a laser peening facility here in Livermore.

The Lab is also a valuable partner with Las Positas College, and the collaboration between the college and the Lab over the years has provided a number of opportunities to enhance the education of local residents and students. This contributes to higher education, economic vitality, and greater quality of life experiences here in Livermore and the Tri-Valley.

2/15.01  
cont.

In summary, the Livermore Chamber of Commerce supports the proposed actions of NNSA relative to operations of the Lawrence Livermore National Laboratory.

It is our hope that the Lab will not just continue to remain in Livermore, but to expand its contributions, to evolve and grow. The Lab is a tremendous asset, benefiting our local quality of life, our local and regional economies, and our state economy. Both in its efforts to create and transfer valuable science and technology to benefit humanity and in its mission to help ensure the security of the United States, we are proud that the Lab calls Livermore its home.

Logan, Yvonne  
Page 1 of 1

Lonhart, Julia  
Page 1 of 1

1/24.04

Thomas Gum, Document Manager  
 215 Dept. of Energy  
 Nat'l Nuclear Security Adm.  
 Livermore Site Office  
 700 East Ave, L-293  
 Livermore CA 94550-9234

Dear Sir - I worked for the Nat'l Inst of Health on the Baby Tooth Survey in the 60's measuring Strontium-90 from the atomic tests. I am very concerned that ST-90, CE-137 and americium-241 are found in water and plants downwind from the LAB. The ST-90, particularly, showed 34 times higher than the legal standard. Please advise.  
 Yvonne Logan  
 36 S. Gore  
 SF. CALIF. 94119

Dear Mr Tom Gum

1/04.01 I am writing to urge you to put a stop to the Environmental Impact Statement on Livermore Labs. I am in fierce opposition to the planned operations for the next ten years. Our future

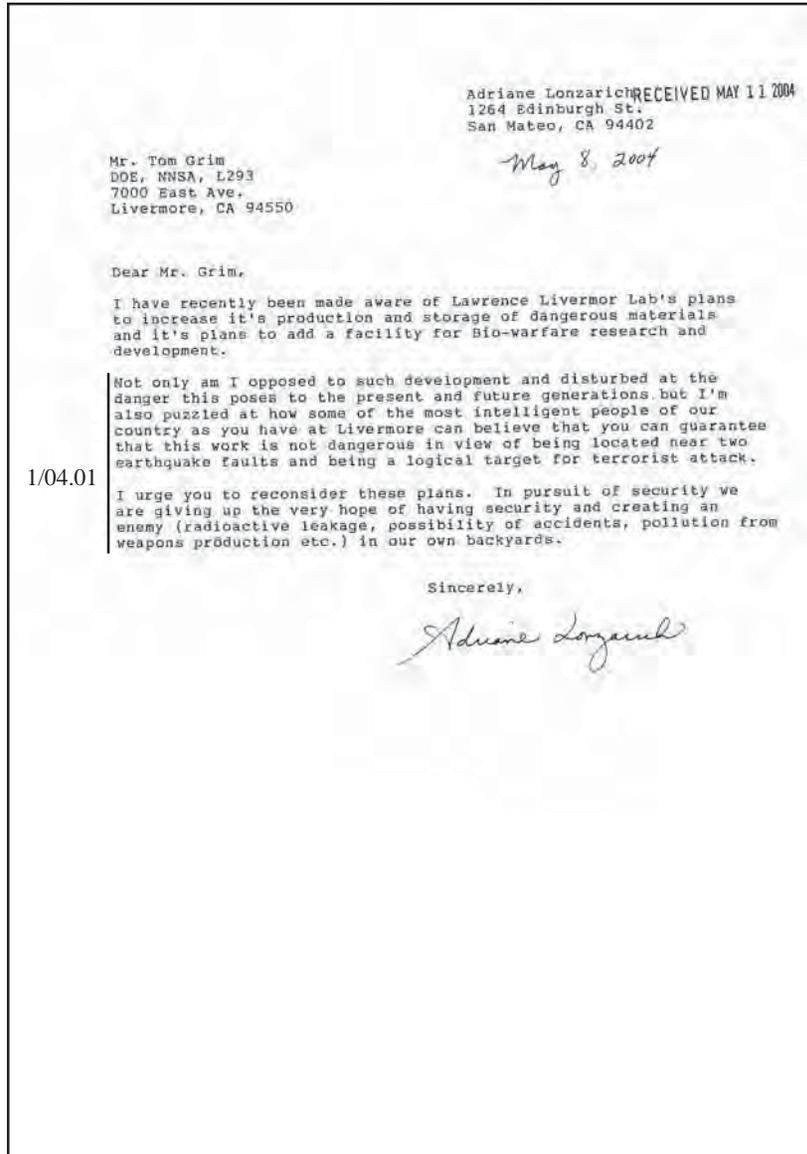
2/33.01 should not revolve around plutonium amounts doubling

3/35.01 and restarting bio warfare development at the cost of our environment and the safety of our nation. The airborne activity is currently at horribly dangerous levels and with the Environmental Impact Statement

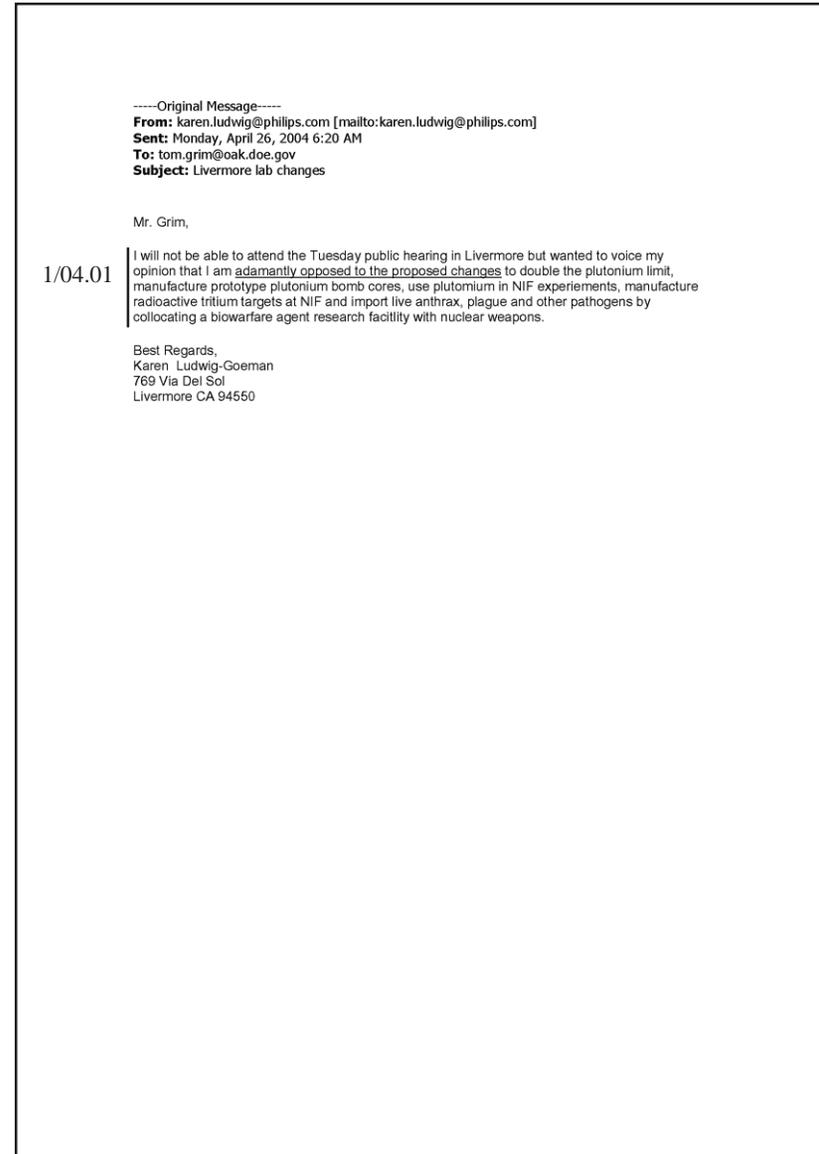
4/17.04 these levels will increase to the destruction of many. Do what is right and put a stop to such a horrible and destructive plan.

Julia Lonhart

Lonzarich, Adriane  
Page 1 of 1



Ludwig-Goeman, Karen  
Page 1 of 1



Lytle, Jackie  
Page 1 of 1

Dear Mr. Grim,

1/04/01 I am writing to urge you to oppose the Environmental Impact Statement on Livermore Lab's planned operations for the next ten years.

2/23/01 I oppose doubling plutonium limits, and I oppose increasing<sup>the</sup> amount of airborne radioactivity. Because the proposed plan will do the above, I

3/17/04 very strongly oppose the plan.

4/35/01 Designing and supporting the start of bio warfare development is immoral. Please consider this letter

Thank you very much  
Jackie Lytle

MacDougall, John

Page 1 of 1

Dear Mr Grim:

1/33.01 I am shocked at plans to increase nuclear-weapons activities and double the amount of plutonium at Livermore National Laboratory. I urge you to cancel those plans, and the following are some critical reasons for this.

- 2/27.02 1. One of these plans was cancelled over ten years ago, on the grounds of being dangerous and unnecessary. This is the Plutonium Atomic Vapor Laser Isotope Separation. This would require a 3-fold increase in the amount of plutonium used in a single room-which would pose grave dangers to public health, and cause serious risks of nuclear nonproliferation in the event some plutonium was stolen.
- 3/37.01 2. Another plan involves testing new technologies to manufacture plutonium pits for nuclear weapons. This-jointly with the Modern Pit Facility--would make possible the production of 150-450 bomb cores annually, which is about the double the combined nuclear arsenals of France and China. This program would gravely destabilize and already-hazardous world.
- 4/26.01, 26.03 3. As a result of these plans, plutonium, highly-enriched uranium and lithium hydride would be added to experiments in the National Ignition Facility (NIF) when the latter is completed at Livermore. That will in turn increase the possibility of using the NIF to develop nuclear weapons, and create additional public-health risks for workers at Livermore.
- 5/26.04 4. Under the plans, the amount of tritium in test targets will rise tenfold. Here again there is a serious radiation danger for Livermore workers-particularly given that Livermore has a history of tritium spills, releases and accidents.
- 6/39.01 5. The plans call for Livermore to develop diagnostics to "enhance" the readiness of the US to conduct full-scale underground nuclear tests. This will lead the world back to the dangerous days of unrestrained nuclear testing..
- 7/35.01 6. The plans provide for an advanced bio-warfare agent facility located at the same area at Livermore as the nuclear-weapons work. This could weaken the international treaty against biological weapons. In addition, at a time of public concern about bioterrorism, the plan could cause the equivalent of a bioterror attack in the event that harmful organisms got out of Livermore. Such an event would threaten not only Livermore workers and residents but millions of people in the nearby Bay Area.

In short, the new plans for Livermore cause very serious problems for public health. Further, they make our country LESS safe by aggravating the risk of nuclear proliferation, and by contributing to the development, testing and deployment of highly-provocative weapons.

Sincerely yours,  
John MacDougall, Professor  
Department of Regional Economic & Social Development  
University of Massachusetts Lowell  
61 Wilder St.  
Lowell MA 01854  
Tel. 978-934-4303, fax 978-934-4028

MacKinnon, Fr Donald, CSsR

Page 1 of 1

I am Fr Donald MacKinnon. I am 70 years old. One of my fondest memories is to have been in New York when Pope Paul VI visited the UN. You remember that he finished his remarks there with the quote from Isaiah, "War never again. No more war."

Clearly, as has become brutally obvious in Iraq, modern war is of another species entirely than the conflicts waged in centuries past. There is no way that non-combatants will not be killed, maimed, even their unborn generations subject to crippling because of nuclear-tipped weapons.

The Rad Lab here at Livermore has a potential for developing peaceful technology. Disastrously, currently it is receiving most of its funding for making unbelievably terrible weapons of war.

1/07.01

As an old American, I beg you to reconsider the uses to which the dedicated personnel at Livermore can spend their creative energies. Help them build the peace. Turn the swords into plowshares.

War never again. War no more.

Thank you.

Fr Donald MacKinnon CSsR  
2215 Rose St  
Berkeley CA 94709-1430

510.981.9005

Makhijani, Ph.D., Arjun  
Page 1 of 2

Makhijani, Ph.D., Arjun  
Page 2 of 2

**Comments of the Institute for Energy and Environmental Research on the Draft Supplemental Site-Wide Stockpile Stewardship and Management Programmatic EIS, Lawrence Livermore National Laboratory, DOE/EIS-0348, February 2004**

by  
Arjun Makhijani, Ph.D  
Washington, D.C. April 30, 2004

These comments on the Livermore Draft Site-Wide Programmatic EIS on stockpile stewardship (abbreviated here as SWPEIS) are restricted to the issues of the environmental and health impacts of plutonium processing covered in the SWPEIS. IEER may submit further comments at a later time.

- 1/33.01 | The proposal to vastly expand plutonium storage and processing in the preferred alternative would convert Lawrence Livermore National Laboratory into a major industrial-scale plutonium processing site. This is a risky idea anywhere, but especially in an urban/suburban community, where there are homes very close to the boundary of the site and about a quarter of a mile from the processing buildings. Even Rocky Flats, located as it was in the Denver-Boulder metropolitan corridor did not have such close proximity of processing buildings to homes. The SWPEIS does not address this problem with any detail or technical depth. Specifically, it is essential that data relating to failure frequencies of equipment, past accident frequencies, accident records from comparable processing facilities at Rocky Flats, be incorporated into the risk analysis in Appendix D and Appendix N. The failure probabilities and source terms will lack scientific foundation and credibility until that is done.
- 2/25.06 | The preferred alternative would process 100 kilograms of plutonium every year, mostly in oxide form and reduced it to metal (Appendix N). This is a large-scale operation for processing enough plutonium metal for 20 to 30 nuclear bombs (depending on the design). It would be 25 times the amount processed under the "No-Action Alternative" discussed in the EIS. Such a scale-up needs to be justified in the context of existing available plutonium processing facilities at Los Alamos National Laboratory, and the expansion of that capacity that has been proposed, including the upgrade of the CMR building at LANL. This alternative does not appear to have been considered at all. No processing at LLNL should be considered as the "no-action" alternative.
- 3/27.01, 05.01 |

2/25.06 cont. | The SWPEIS states that "some changes in equipment and procedure" would be needed, mostly to reduce worker radiation doses. But a detailed analysis of these changes is not presented. Without such an analysis it is impossible to evaluate the postulated accident frequencies and source terms in Appendix D, or the routine radiation doses from plutonium processing. The SWPEIS proposes to use direct reduction of plutonium oxide with calcium. This is an exothermic reaction. The risks of accidents and process upsets, derived from prior experience, need to be presented in detail, based on experience with this specific process.

4/27.03 | THE SWPEIS assumes that Livermore will receive feed materials from which americium has been "completely removed" (p N-16); shipments would be from Hanford and SRS. What is the basis for assuming this? For instance, there are no operating processing facilities at Hanford that would allow for completely americium-free material to be received. This assumption appears to be quite unrealistic and needs to be justified in detail or changed. Given the importance of americium for both radiation doses as well as for waste management, it is essential that the SWPEIS have a more realistic assumption about americium contamination of the feed material. As it is even with the assumption of receipt of clean material and only 2 years of storage, a waste stream of up to about 10 kilograms of americium/plutonium metal per year is expected to be generated (p. N-16)

5/25.05 | The SWPEIS indicates that the americium/plutonium metal buttons would either be sent to LANL or to WIPP. The State of New Mexico has stated that it will not allow waste material in WIPP that was not included in the 1995 TRU Waste Baseline Inventory Report (DOE/CAO-95-1121).<sup>1</sup> Pure TRU metal from Livermore or any other site is not included in that inventory. The SWPEIS is silent on this issue. It also does not specify the eventual disposition of the waste that would remain in case the plutonium/americium buttons are sent to LANL and some of the plutonium is recovered. Neither does it justify why these operations should not be done at LANL so that unnecessary transport is avoided.

6/31.04 | The production of large amounts of plutonium metal and its processing and evaporation so as to enable the isotopes to be separated by atomic vapor laser separation may entail significant risks that must be evaluated in the context of the urban/suburban location of LLNL.

IEER will present further comments in writing before the end of the comment period. But even a preliminary review of the plutonium processing aspects of the SWPEIS has revealed profound and fundamental deficiencies in this draft document. These deficiencies are so serious that the DOE should re-do the document and re-issue it as a draft so that a more thorough public discourse and public comment on this is possible.

<sup>1</sup> I would like to thank Don Hancock of the Southwest Research and Information Center for the information relating to the WIPP permit.

Manley, James  
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2619 Benvenue Ave. Apt. G  
Berkeley, CA 94704  
April 29, 2004

Tom Grim, Document Manager  
NNSA Livermore Site Office, L-293  
7000 East Avenue, Livermore, CA 94550-9234  
[tom.grim@oak.doe.gov](mailto:tom.grim@oak.doe.gov)

Mr. Grim,

Thank you very much for your presentation this Tuesday in Livermore. It must be difficult to go up in front of such an obviously hostile crowd and present details about the proposed increase in plutonium and biological agents in the neighborhoods of those present. If no one does it, though, the people won't know: thanks for your contribution.

I have several questions and reservations about the draft EIS that I would like to see addressed. My comments are based on the summary, so I apologize if by skipping the longer version I missed some key details. If this is the case, please provide a thorough explanation of the relevant issues in your response, and consider making the summary more comprehensive.

1/22.01 First is the issue of the WIPP. A "mobile" contractor is to package and ship more than 1,000 drums of highly radioactive waste to the WIPP, but I can find no mention of exactly what or where this facility is: please clarify. In S.5.1.9 it says that the DOE has determined the WIPP Mobile Vendor facility to be categorically excluded from NEPA review, but it is far from obvious why the loading point for shipments containing potentially fissile materials should be considered so free of potential damage to the environment as to be glossed over. While on-site, materials may be more likely to be stable (barring seismic events or terrorism) but transportation seems likely to increase the probability of accidental releases or worse. Please complete the EIS to compensate for this omission and resubmit it.

2/38.01 Next I want to question the exclusion of the Container Security Testing Facility. If container security is being tested, the potential for container breach must exist. Given the possibility of breach, one cannot exclude the possibility of accidental emissions, and accompanying damage to the environment and/ or people in the environs. Please consider this issue and submit another draft EIS.

3/35.01 The BSL-3 facility also raises questions. The DOE has apparently already deemed the facility to be harmless, but I would like an evaluation of the possibility of accidental emission or exposure to biological agents via access and egress points. How will the agents be brought to Livermore? How will they be disposed of?

4/33.01 Section S.5.1.4 says that "Superblock operations would have to be modified or curtailed if a disposition pathway is not established for plutonium." Given that no disposition pathway is available (two lines previous) it seems clear that operations have to be curtailed! The language of this document makes imperative a cessation of activity, not an expansion: the Proposed

Manley, James  
Page 2 of 3

4/33.01 cont. Alternative is clearly infeasible by the DOE's own standards, as is the mislabeled "No Action Alternative." At the very least this language needs to be clarified: what is the timetable within which a disposition pathway must be found before curtailment begins? Why has it not begun already, when this document argues that it must?

5/30.01 Again with respect to the Superblock, section S.5.2.2 says that evaluation of terrorist acts and Superblock security is provided in classified or official use only documents. Mr. Grim's presentation on Tuesday, April 27 contended that no portions of the document remained classified (Power Point presentation, slide 5). Particularly given the more recent DOE statement on the need to reconsider having multiple stockpiles of radioactive material, it is important that this material be made public. Further, the present document obviously was not written in light of the more recent DOE admission of the importance of potentially centralizing stores of plutonium and other fissile materials. The EIS must be performed again in light of the obviously powerful ramifications of the new information and analyses.

6/25.01, 25.08 Next, the accident analysis is woefully inadequate. The contention in S. 5.2.4 that an aircraft crash into a pit manufacturing facility under the Proposed Action Alternative would result in nothing more than 0.168 latent cancer fatalities per year is simply ludicrous. The impact from an airplane (why is it only a single-piston airplane?) crash would obviously breach any safety features, and sixty kilograms of fuel-grade equivalent plutonium's being exposed to extremely high temperatures from a fuel explosion seem likely to do more than release a few stray gamma rays. Even under the No Action Alternative it seems likely that 20kg of such plutonium in a pit manufacturing facility might reach criticality with horrific consequences.

7/25.06 The accident scenario in general is poorly designed. The rareness of the considered incident- less than once every million years- illustrates the lack of consideration in selecting the scenario more than anything else. It is tautologically designed: something rare, the DOE tells us, is rare. Why is there no consideration of purposive attack? Why is the seismic appendix withheld from the summary, and why did Mr. Grim fail to present any relevant information in his presentation? The draft EIS does not attempt to consider more than this one poorly designed case, and obviously more than one type of accident or event is possible, so again we find a need for the generation of a more comprehensive report listing, ironically, more common types of accidents and potential damage caused by each.

8/20.01 In particular, the failure to consider accidents during transportation is egregious. What is the possibility of an automobile accident on any given stretch of road? Consider the number of shipments to the facility, traveling thousand of miles from South Carolina and from Washington to Livermore. Consider also the number of shipments from the facility to the WIPP. Consider the number of people on the route and the possibility of accidental exposure. In Mr. Grim's presentation, he described the additional ambient radiation that population will be exposed to as the vehicles simply move through the cities along the way, but no mention was made of the possibility of collision or other accident. This needs to be corrected: please provide detailed information on the exact corridors and anticipated amounts of materials of all types to be transported along them. Corridors and anticipated transit should consider both access to and egress from the LLNL. Further, no mention is made of the potential exposure by truck drivers or other transportation workers. Please perform such analysis and resubmit this document.

Manley, James  
Page 3 of 3

9/26.04	Another apparent oversight is the possibility of accidental breach of a tritium firing chamber. Certainly human error could lead to the venting of some tritium.
10/35.01	Further, no mention is made of the risks involved in transporting the biological agents: the Proposed Action Alternative involves increased experimentation with these agents, and so the risk of accidental release must be considered, both from the LLNL and while in transit. The accident scenario alleges that the plane accident would have the same effect on the potential release of biological agents regardless of which alternative is chosen, but earlier the draft indicates that the Proposed Action involves increased work with biologicals, implying that greater quantities could be involved. This too must be corrected.
11/25.04	More transit issues arrive with the planned shipment of transuranic waste from the Lawrence Berkeley National Laboratory. No analysis of the environmental or human risks involved in loading, transport, unloading, and storage is provided.
12/36.01	Human damage is calculated only in terms of latent cancer fatalities, but other morbidity consequences seem to be ignored. Please consider and report all types of morbidity effects of the facility both now and under all alternatives.
13/23.03	Since energy generation has clearly established environmental consequences, why is the issue of energy consumption not considered in this EIS? Regardless of how the existing millions of kilowatt-hours per year are used, the fact that they are used in itself implies significant environmental damage. This also needs to be considered.
14/21.01	Finally, I call upon the DOE to include several more options for future action, as requested by others in previous letters. There should be a "conversion to civilian research" option. There should also be a "conversion to a facility researching plutonium disposal" option. There should be a true No Action Alternative rather than one that actually increases energy use above the Proposed Action Alternative. And finally, per the more recent DOE admission, there should be a "Move all radioactive and weapons material to a more secure facility which is more distant from all population centers" option.
15/07.01	I look forward to your resubmission of this draft EIS and the next round of public comment. I also look forward to the day when our society no longer attempts to find excuses to justify the construction and repeated testing of nuclear weapons. This is the highest perversion of human intellectual power ever committed- please call it off!
16/05.01	Sincerely,
17/08.02	James Manley University of California, Berkeley Ph.D. student

Manley, James  
Page 1 of 2

	-----Original Message----- From: James Manley [mailto:isahavajoe@yahoo.com] Sent: Saturday, May 08, 2004 8:51 PM To: tom.grim@oak.doe.gov Cc: marylia@earthlink.net; schultz@fst.gulink.edu Subject: comments on draft EIS
	Hello! I already sent in some comments on the draft EIS, but I realized that there was one issue which I neglected.
1/31.01	I see no justification in the draft EIS for the timeframe for the proposed action. As UC Berkeley Economist David Zilberman has written, there is a third option often overlooked in project evaluation: the possibility of delaying the project. In many cases, postponement of a project allows waiting for technology to be developed and allows for further analysis of the manifold ramifications of complex projects. Building on the work of Nobel Prizewinner Ken Arrow (Arrow and Fisher 1974) and Dixit and Pindyck (1994), he and his coauthor Karina Schoengold describe the importance of considering the time of construction. Their model maximizes discounted expected net benefits when a stochastic element is part of the benefit function, much as your economic analysis must be doing (unless you have somehow been given perfect knowledge!) They find that the variance of the marginal benefit of project function can be reduced and the overall stream of benefits of a project enhanced if uncertainty is minimized at the time of project initiation, and in particular postponing projects to allow for extra time to enhance learning about how to optimize project parameters can enhance total project value. They say, "In particular, in cases where there is uncertainty about [research] productivity as a result of availability of a new technology or uncertainty about environmental impacts of [program] activities, the option value of waiting may be quite high and there may be significant gain from delay." (p. 36) Thus, justifying a given action implies justifying the selected timeframe. In the draft EIS, as I noted in my previous letter, you call attention to the lack of an existing means for the disposal of plutonium. It seems extremely likely that investing research in this area right now is likely to improve returns to later program development. In other words, given the current state of technology, this project is not justified at the current time. The EIS must demonstrate the optimality of proceeding with any alternative other than a true no-action alternative over a scenario of delayed construction, which might include a reshuffling of research priorities in the short term, until a satisfactory means for plutonium disposal is found.
	Thank you for your consideration, and I look forward to your comprehensive response.
	James Manley 2619 Benvenue Ave. Apt. G Berkeley, CA 94704 (510)843-8434

**Manley, James**  
**Page 2 of 2**

References:

Arrow, K. and A. Fisher, 1974. "Environmental Preservation, Uncertainty, and Irreversibility," Quarterly Journal of Economics, 88: 312-19.

Dixit, A., and R. Pindyck, 1994. Investment Under Uncertainty. Princeton: Princeton University Press.

Schoengold, Karina and David Zilberman, "The Economics of Water, Irrigation, and Development", forthcoming in "Handbook of Agricultural Economics: Volume 3", editor Robert Evenson.

**Markman, Leona**  
**Page 1 of 3**

-----Original Message-----  
 From: Bhasaleona@aol.com [mailto:Bhasaleona@aol.com]  
 Sent: Monday, May 10, 2004 11:24 AM  
 To: tom.grim@oak.doe.gov  
 Subject: opposition to livermore

Mr. Tom Grim  
 >DOE, NNSA, L-293  
 >7000 East Avenue  
 >Livermore, CA 94550  
 >  
 >for further information contact Tri-Valley CAREs at (925)  
 >443-7148 [www.trivalleycares.org](http://www.trivalleycares.org)  
 >  
 >  
 >The letter itself is in blue text. Following the letter is information  
 >about what DOE & LLI is proposing.  
 >  
 >  
 >Dear Mr. Grim,  
 >  
 >Please consider this letter with my comments on the environmental and  
 >proliferation risks from proposed nuclear weapons development and new  
 >plutonium and tritium programs at the U.S. Department of Energy's (DOE)  
 >Lawrence Livermore National Laboratory (LLNL).  
 >  
 >I write to you because the DOE has prepared a draft Site Wide  
 >Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear  
 >weapons activities at the Livermore Lab in Northern California.  
 1/02.01 >Livermore Lab is working on the design of a new, high-yield nuclear  
 >bunker-buster, called the "Robust Nuclear Earth Penetrator," and I  
 >oppose its development. Additionally, I oppose the development of  
 >so-called "mini-nukes" and other new nuclear weapons concepts being  
 >researched at Livermore Lab.  
 >  
 >Here are my comments on six dangerous new programs being proposed at  
 >Livermore Lab.  
 >  
 2/08.02 >1. Storage of More Nuclear Materials: This plan will more than double  
 >the storage limit for plutonium at Livermore Lab from 1,540 pounds to  
 >3,300 pounds. It would increase the radioactive tritium storage limit  
 >from 30 grams to 35 grams. I join California Peace Action and the  
 >Livermore-based Tri-Valley CAREs group in calling on DOE to  
 >de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.  
 >  
 3/27.01 >2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan  
 33.01

Markman, Leona

Page 2 of 3

3/27.01 >will revive a project that was canceled more than 10 years ago because  
 33.01 >it was dangerous and unnecessary. The project is Plutonium AVLIS. This  
 cont. >is a scheme to heat and vaporize plutonium and then shoot multiple  
 >laser beams through the hot vapor to separate out plutonium isotopes.  
 >To do this, Livermore Lab plans to increase the amount of plutonium  
 >that can be used at one time in any one room from 44 pounds to 132  
 >pounds a 3-fold increase. I join California Peace Action and the  
 >Livermore-based Tri-Valley CAREs in calling for cancellation of this project.  
 >

4/26.01 >3. Dangerous New Experiments in the National Ignition Facility  
 26.03 >Mega-Laser: This plan will add plutonium, highly-enriched uranium and  
 >lithium hydride to experiments in the National Ignition Facility (NIF)  
 >mega-laser when it is completed at Livermore Lab. Using these materials  
 >in the NIF will increase its usefulness for nuclear weapons  
 >development. It will also make the NIF more hazardous to workers and  
 >the environment. I join California Peace Action and the Livermore-based  
 >Tri-Valley CAREs in calling for a close out of the NIF project and  
 >termination of plans to use plutonium and other new materials in it.  
 >

5/37.01 >4. New Technologies for Producing Plutonium Bomb Cores: This plan  
 >makes Livermore Lab the place to test new manufacturing technologies  
 >for producing plutonium pits for nuclear weapons. A pit is the  
 >softball-sized piece of plutonium that sits inside a modern nuclear  
 >weapon and triggers its thermonuclear explosion. DOE says these new  
 >technologies will then be used in a new bomb core factory, called the  
 >Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will  
 >enable the MPF and production of 150 - 450 plutonium bomb cores  
 >annually, with the ability to run double shifts and produce 900 per  
 >year. This production capability would approximate the combined nuclear arsenals of  
 >France and China each year.  
 >I join California Peace Action and the Livermore-based Tri-Valley CAREs  
 >in calling for termination of this technology development project.  
 >

6/39.01 >5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan  
 >calls for Livermore Lab to develop diagnostics to "enhance" the  
 >nation's readiness to conduct full-scale underground nuclear tests at  
 >the Nevada Test Site. This is a dangerous step back to the days of  
 >unrestrained nuclear testing and I join with California Peace Action  
 >and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to  
 >conduct full-scale tests.  
 >

7/35.01 >6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore  
 >Lab. It calls for collocating an advanced bio-warfare agent research  
 >facility with nuclear weapons activities in a classified area at  
 >Livermore Lab. The DOE proposes genetic modification and aerosolization  
 >(spraying) with live anthrax, plague and other deadly pathogens on site

Markman, Leona

Page 3 of 3

7/35.01 >at LLNL. This could weaken the international biological weapons treaty  
 cont. >-- and it poses a risk to workers, the public and the environment here in the California.  
 >Interestingly, this program is listed as part of LLNL's "no action  
 >alternative" as though it were an existing program -- even though it is  
 >not yet constructed, Tri-Valley CAREs has brought litigation against  
 >it, and a federal Judge has issued a "stay" prohibiting the importation  
 >of dangerous pathogens into the facility while the lawsuit moves  
 >forward. I join Tri-Valley CAREs in opposing the operation of a  
 >bio-warfare agent facility at Livermore Lab.  
 >

8/04.01 >I believe the DOE plan to introduce new weapons programs into LLNL will  
 >promote a new arms race and escalate the nuclear danger. Further, the  
 >DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds  
 >and triple the amount held "at risk" in any one room increases the  
 >environmental threat LLNL poses to the people of California. The SWEIS  
 >propels Livermore Lab in exactly the wrong direction.  
 >

9/07.01 >Instead of proposing new weapons projects, DOE should enhance the  
 >peaceful, civilian scientific capabilities and mission at Livermore Lab  
 >by proposing new, unclassified programs in environmental cleanup,  
 >non-polluting and renewable energy, earth sciences, astrophysics,  
 >atmospheric physics and others. The alternative of a "green lab" in  
 >Livermore should be pursued instead of the dangerous nuclear weapons  
 >future proposed by the Site Wide Environmental Impact Statement.  
 >

>Sincerely,  
 >  
 >leona markman,  
 >509 townsend drive  
 >aptos ca 95003

Marks, Diane D.  
Page 1 of 1

Marquis, Louise  
Page 1 of 3

PO Box 95  
Bass Lake, CA 93604  
April 27, 2004

Tom Grim  
DOE, NNSA, L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Yes, it is a grim scenario that the DOE and the current administration projects for its citizens: more nuclear weapons. Of course, to preserve the environment and all living things in it -- and peace -- what needs to happen is the total abolition of nuclear power.

Why does this administration appear so blind to the dangers of nuclear power? Even if they are scientifically ignorant, at least they are human beings with children and grandchildren, and it should be expected that all of them would want to leave this earth a safer, cleaner place for the coming generations. Do they wear blinders about nuclear power and weapons simply because they want to provide endless work and big bucks for their military-industrial cronies? This would be immoral, of course.

More specifically, it is particularly unacceptable to plan for a huge increase in producing plutonium pits leading to 150-900 bomb cores annually. What can the USA possibly want with this overkill stock of bombs? Even if some of the current administration have imperialistic and dictatorial ideas about controlling the entire world, to have so many nuclear bombs is clearly megalomania. This also is immoral - as well as deluded.

As far as Livermore Labs, it is really too bad that you brilliant employees there cannot find it in yourselves to simply refuse to build nuclear weapons any longer. It's your kids too who will have to face the environmental and life-threatening nightmare. I know some of you have quit in disgust, and those folks feel better about themselves because of no longer participating in lab-devised plans for mass murder. I encourage all of you to promote the conversion of the lab's work to peaceful and pro-environment types of scientific work -- a different path to ensuring yourselves continued employment.

Please include these complaints and suggestions in the public input comments on the draft EIS. Thank you.

1. Nuclear weapons are immoral.
2. An overkill stock of bombs from an increased production of plutonium pits is megalomaniac.
3. The Livermore Labs projects and work (ends and means) can be converted to peaceful uses; start now.

Sincerely yours,  
*Diane D. Marks*  
Diane D. Marks

1/02.01

2/37.01

3/07.01

2/37.01  
cont.

3/07.01  
cont.

4-25-04

Dear Mr. Grim,

I object to the Dept. of Energy's recently released SWEIS (Site-Wide Environmental Impact Statement) for Livermore Labs planned operations for the next ten years.

I am outraged that the SWEIS calls for doubling the amount of plutonium allowed for Livermore Labs from 1540 pounds to 3300 pounds. One microscopic particle of plutonium, if inhaled, can cause lung cancer. Just a few pounds of plutonium can make more than 300 nuclear bombs.

In addition, the SWEIS

1/04.01

2/33.01

3/37.01

Marquis, Louise  
Page 2 of 3

Marquis, Louise  
Page 3 of 3

3/37.01  
cont.

plan makes Livermore Labs  
the primary test site for  
new technologies for  
"manufacturing" plutonium  
pits" for nuclear weapons.  
A "plutonium pit" is a  
soft-ball sized piece  
of plutonium that sits  
inside a nuclear  
weapon and triggers  
thermonuclear explosion.  
This is a threat to the  
health + safety of all  
of us living in the Bay  
Area, as well as a  
horrible danger to the  
world due to the creation  
of many additional  
nuclear weapons.

4/39.01

Also, the ~~SWEIS~~ SWEIS  
calls for Livermore Labs  
to be the center of  
development of a new  
round of underground

4/39.01  
cont.

nuclear testing. This  
is a danger to health  
as well as to  
world peace.

Please oppose  
this terribly misguided  
and dangerous  
SWEIS!

Sincerely,

Louise Marquis

Miss Louise Marquis  
P.O. Box 2283  
Berkeley, CA 94702

Martin, John W.  
Page 1 of 1

Maybury, John  
Page 1 of 1

11645  
RECEIVED MAY 25 2004

John W. Martin  
3575 Acapulco Trail  
Housand Palms, Ca 92276

May 19, 2004

Mr. Tom Grim  
DOE  
4NSA L-293  
7000 East Ave.  
Livermore, CA 94550

Re: My comments on six dangerous new programs being proposed at Livermore Lab

Dear Mr. Grim:

Please consider this letter as my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL). The DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California.

Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab including: 1) Storage of More Nuclear Materials, 2) Plutonium Atomic Vapor Laser Isotope Separation (AVLIS), 3) Dangerous New Experiments in the National Ignition Facility Mega-Laser, 4) New Technologies for Producing Plutonium Bomb Cores, 5) Enhancing Readiness to Resume Full-Scale Nuclear Tests, 6) Mixing Bags and Bombs.

I believe the DOE plan to introduce new weapons programs into LLNL will accelerate a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit and triple the amount held "at risk" increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction. Instead of proposing new weapons projects, DOE should develop the peaceful, non-military scientific capabilities at Livermore Lab.

Sincerely,  
  
John W. Martin

1/04.01

FROM : DAVIDSON DIRECT/GOODBUSTER      FROM NO. : 6580358163      MAY. 15 2004 09:45PM P1

 **Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement**   
U.S. Department of Energy  
National Nuclear Security Administration

5/15/04

**Written Comment Form**  
*Must be received in or before May 27, 2004*

To TOM GRIM

1/33.01 I am concerned about  
plans to increase  
plutonium at the labs.

2/08.01 As a resident of the  
Bay Area, I would like  
to see plutonium way  
out in the desert and  
research only for  
peaceful uses, not  
weapons. Thank you.

3/07.01

John Maybury  
1302 Rosita Road  
Pacific CA 94044

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

McCann, Kay  
Page 1 of 1

McCauley, Jacqueline  
Page 1 of 1

Katherine McCann  
585 Chelmsford  
Hillsborough, CA 94010  
May 7, 2004

Mr. Tom Grim,  
DOE, NNSA, L-293  
7000 East Ave.  
Livermore, CA 94550

Mr. Tom Grim,

1/04.01 | I understand that LLNL has plans to increase it's supply of plutonium, revive the dangerous process of Vapor Laser Isotope Separation, restart the production of deadly Tritium cores and add a facility for Bio-warfare research.

I believe this planning is suicidal for our nation and indeed for the earth itself! How is this different than a suicide bomber?

The U.S. already has the largest supply of weapons of "mass destruction". Adding to that number only stimulates other nations to arm themselves against them. Equally disturbing is the fact

2/14.01 | that all of this stockpiling and research is being done near two earthquake faults.

3/07.01 | I urge you to turn away from competing for ever more destructive weaponry ant to concentrate instead on creating and supporting plans to decrease such weaponry.

Sincerely,  
Kay McCann

Dear DOE:

Here is my comment on the Draft Site Wide Environmental Impact Statement on Livermore Lab operations over the next 50 years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,340 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility," fissioning plutonium in the NIF mega-laser; and vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

1/01.01  
2/04.01  
3/07.01  
4/02.01 | I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab mission.

Signed: Ms. Jacqueline McCauley  
15063 Excelsior Dr.  
La Mirada, CA 90638

To: Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

RECEIVED MAY 10 2004

Address: Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

**McFadden, Ray**  
**Page 1 of 1**

**McGee, Claire**  
**Page 1 of 1**

Ray McFadden  
 527 29th St  
 San Francisco, CA 94131

May 25, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

Regarding the risks from proposed nuclear weapons development at Lawrence Livermore Labs.

- 1/02.01 | I strongly oppose the proposed development of the mini-nukes and new nuclear bunker-buster at Livermore Labs.
- 2/04.01 | We need less plutonium at Livermore Labs, not more. It is insane to increase the radioactive capacity of this facility so close to major population centers and seismic faults. I fully support the advocacy of Tri-Valley CAREs and the California Peace Action group against Livermore Labs. I am particularly concerned about the discussion to research biologic and nuclear weaponry in our community. This needs to stop. Please re-focus the incredible talent of that facility on programs that would reduce our reliance on non-renewable energy and on the critical issues facing our children such as global warming, sustainable energy and clean water supplies.
- 3/35.01 |
- 4/07.01 |

Sincerely,

Ray McFadden

Gentlemen:

You are no doubt getting many copies of a letter, against ramping up nuclear activities at Livermore Lab.

I will not reprint it here. I agree with it, and urge you to stop the insanity.

1/04.01

If a car is headed for a cliff, what is needed is to put on the brakes and turn around and get away from the cliff. We need to stop adding to nuclear weapons now, before it is too late. We are headed over the cliff.

Thank you for your consideration.

Claire McGee  
 2236 SE Brooklyn  
 Portland OR 97202  
 503 901-1450

McGovern, Shirley  
Page 1 of 1

McNulty, Robin  
Page 1 of 1

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

From: nookno@webtv.net [mailto:nookno@webtv.net]  
Sent: Tuesday, April 27, 2004 9:20 AM  
To: tom.grim@oak.doe.gov  
Subject: Lawrence Livermore EIR plan

Dear Sir:

The proposed plans for Livermore Lab are totally unacceptable. Not only do I firmly believe that there is no over-riding reason in this world today for us to plan further technology for weapons of mass destruction, but also the real potential for a disaster of our own making on our own people.

1/04.01

While I abhor the world terrorist organizations and their total disregard for life, I sense that we are becoming like them. Will our government, in the guise of national security become the terrorists we so fear?

This plan must not go forward.

Shirley McGovern  
947 Avd Carmel, #A  
Laguna Woods, CA 92653

4-21-04

Mr. Grim,

1/37.01

2/39.01

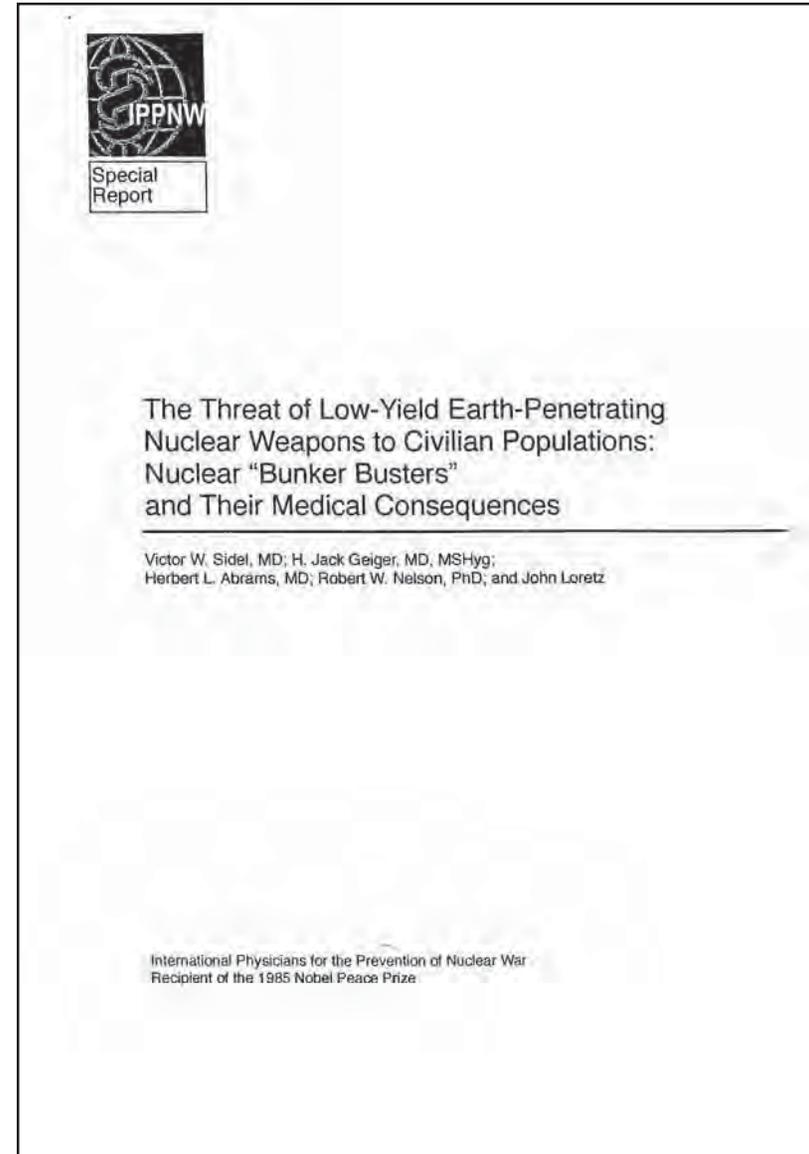
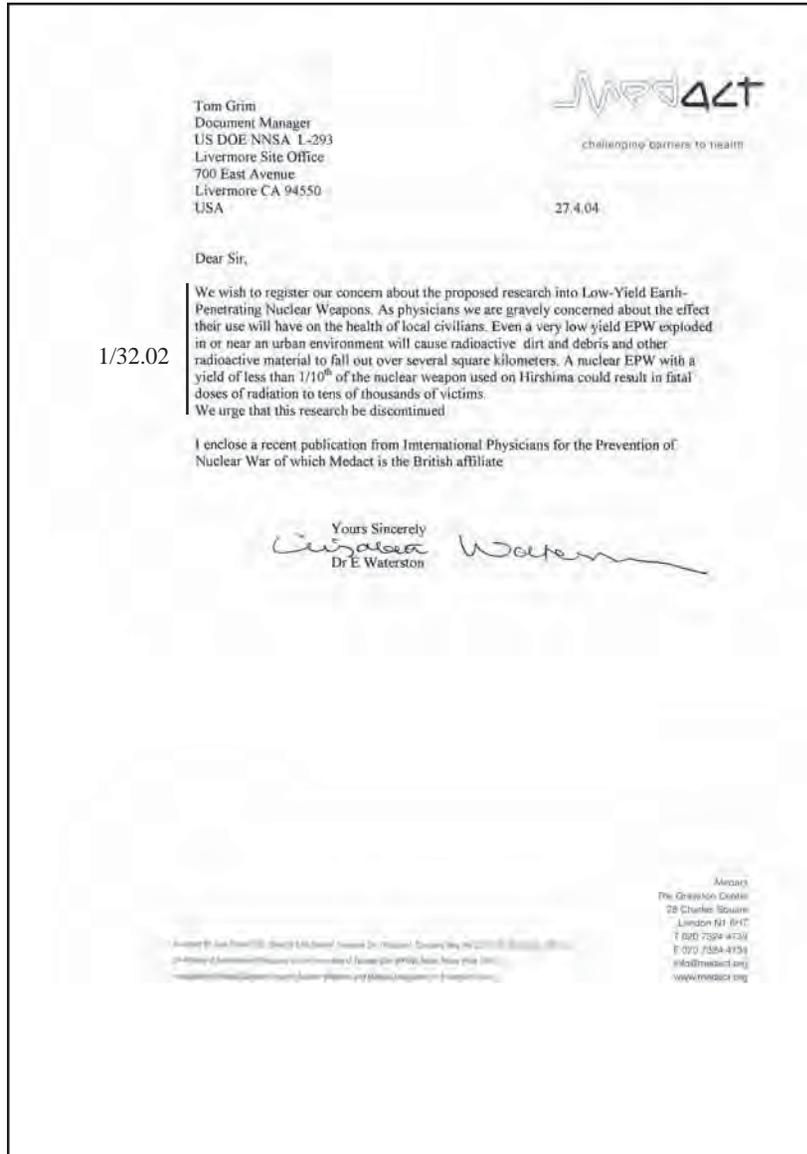
I am writing to share my opposition to weapons manufacturing/testing in my area. Please stop your planned operations for the next ten years. I urge you to stop the manufacturing of weapons of mass destruction.

Sincerely,

Robin McNulty,  
Palo Alto, CA

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Page 3 of 10

International Physicians for the Prevention of Nuclear War  
727 Massachusetts Avenue  
Cambridge, MA 02139 USA  
Phone: 617-868-5050  
Fax: 617-868-2560  
E-mail: [ippnw@bos.org](mailto:ippnw@bos.org)  
Website: [www.ippnw.org](http://www.ippnw.org)

The authors are grateful to Adam Hughes, Program Analyst, Physicians for Social Responsibility, for his contribution of current data on U.S. nuclear weapons.

Report design, layout, and copyediting Lynn Martín, Communications Director, IPPNW.

#### About IPPNW

International Physicians for the Prevention of Nuclear War (IPPNW) was founded in 1980 in response to the growing threat of nuclear war. IPPNW is a non-partisan international federation of physicians' organizations dedicated to research, education, and advocacy relevant to the prevention of nuclear war. To this end, IPPNW seeks to prevent all wars, to promote non-violent conflict resolution, and to minimize the effects of war and preparations for war on health, development, and the environment.

There are IPPNW affiliated groups in 58 countries, representing physicians, health care workers, medical students, and concerned citizens world-wide.

For its efforts to educate the public and politicians about the medical consequences of nuclear warfare, IPPNW received the 1985 Nobel Peace Prize.

March 2003  
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Medact, Dr. E. Waterston  
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#### Abstract

Proponents of a new generation of low-yield nuclear earth-penetrating weapons (EPWs), such as modified versions of the B61-11 currently in the US stockpile, claim that such weapons could be used against deeply buried and hardened underground bunkers with "minimal collateral damage." Even a very low-yield nuclear EPW exploded in or near an urban environment will, however, cause radioactive dirt and debris and other radioactive material to fall out over several square kilometers. A nuclear EPW with a yield less than one-tenth of that of the nuclear weapon used on Hiroshima or Nagasaki could result in fatal doses of radiation to tens of thousands of victims. Biological and chemical agents stored in targeted bunkers may be dispersed into the atmosphere without being destroyed by an EPW, potentially injuring or killing unprotected civilians. The number of casualties from a nuclear EPW attack would depend on the location of the target, the density of the surrounding population, the extent of debris dispersal, and the possibility of escape or evacuation. In addition to the acute and long-term medical consequences, use of nuclear weapons would weaken existing restraints against further proliferation or use of nuclear weapons and would cross a threshold that has been maintained since 1945, when the United States detonated the first nuclear weapons over Hiroshima and Nagasaki.

#### Introduction

The imminence of "pre-emptive" war against Iraq has raised concerns about the weapons that may be used to destroy underground command centers and alleged underground storage sites for chemical and biological weapons.<sup>1</sup> Such sites may be deeply buried and "hardened," protected by large amounts of steel-reinforced concrete designed to withstand the effects of aerial bombardment with conventional weapons. Earth-penetrating weapons – EPWs or "bunker busters" – are designed to hit the earth at high speed and to penetrate into the ground before exploding. Earth penetration increases the damage done to underground targets by "coupling" the energy of the explosion to the ground.

The United States currently deploys both conventional and nuclear EPWs. The largest and most effective conventional systems (the GBU-28 and the GBU-37) are designed to be dropped from an aircraft, have about 630 lbs of high explosive, and during tests have been able to penetrate up to 6 meters in concrete or 30 meters of earth. EPWs composed of conventional explosives are capable of destroying shallow-buried structures at depths less than 10 meters below the surface, but they are likely to be ineffective in the destruction of more deeply buried and hardened sites.

The United States also has about 50 nuclear-tipped EPWs (the "B61 modification 11") which are designed to be dropped from aircraft. Tests indicate the current design penetrates 2-3 meters in frozen soil. The yield of these warheads is reported to be between 0.3 kilotons and 340 kilotons. Production of a new generation of nuclear weapons designed as EPWs has been proposed and is being studied. A 1994 law currently prevents development of weapons with yields less than 5 kilotons (colloquially known as "mini-nukes"), but the House of Representatives, during this session of Congress, recommended that this restriction be eliminated.<sup>2-3</sup>

In January 2002 the Department of Defense and the Department of Energy released a new Nuclear Posture Review (NPR). These periodic reviews, required by Congress, describe the nuclear forces the Department of Defense deems necessary. The 2002 NPR added five new countries as potential targets for U.S. nuclear weapons. In addition to Russia and China, the Democratic People's Republic of Korea (North Korea), Iraq, Iran, Syria, and Libya are specifically listed as potential threats. The NPR makes clear that the U.S. nuclear arsenal could also be used to deter and respond to any use by those nations of nuclear, chemical, or biological weapons. Much of the new focus is on attacking "hardened deeply-buried targets" with nuclear EPWs. The 2003 DOE budget specifically requests funding for a "Robust Nuclear Earth Penetrator" (RNEP) that would be more effective than the existing modification of the B61. The debate about the RNEP has concentrated on a number of modifications to improve the B61

IPPNW – Threat of Low-Yield Earth-Penetrating Nuclear Weapons to Civilian Populations

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and new modifications on the B83, the largest nuclear warhead in the U.S. arsenal. The modifications would include: developing new casings for the warheads so the speed at impact could be increased, thereby allowing the weapon to safely penetrate deeper; improving guidance systems for higher accuracy; better attitude controls at impact to ensure penetration at the right angles and smarter fuses to control detonation at the proper time.

Some government and military officials have suggested that these low-yield earth-penetrating nuclear weapons could be used with "minimal collateral damage." A straightforward analysis<sup>4</sup> based on physical estimates and data from underground nuclear testing indicates, on the contrary, that even a very low yield nuclear weapon used in an urban environment would risk producing tens of thousands of civilian radiation casualties. Casualties of this magnitude would overwhelm even the most effective medical care system.

The medical consequences of use of nuclear weapons in the kiloton range (such as the bombs with explosive force approximately equivalent to 15 thousand tons of TNT used on Hiroshima and Nagasaki in 1945) and in the megaton range (such as weapons with explosive force as high as 20 million tons of TNT equivalent that have been tested by the United States and the Soviet Union) have been extensively analyzed.<sup>5-9</sup>

#### Characteristics of Nuclear Weapons Explosions

Analyses of the effects of the use of nuclear weapons of greater power have distinguished between the effects of their detonation as an air burst or as a ground burst. Detonation of a nuclear weapon in the air thousands of feet above the ground—as was the case for the bombs used on Hiroshima and Nagasaki—results in an extensive area of blast and heat damage, much greater than the area damaged by a weapon detonated at ground level. Air bursts also expose those on the ground to radiation injury from the initial flux of neutrons and gamma rays produced by the nuclear reaction and also by subsequent fallout from radioactive particles lofted into the atmosphere by the explosion.

A surface or shallow-buried ground burst, in contrast, results in a smaller area of blast and heat damage and less injury from the prompt gamma radiation. However, a large crater open to the atmosphere is almost certain to be formed at the surface by the explosion. For a one-kiloton weapon, nearly a million tons of dirt and debris excavated by the ground burst would be spread over a wide area surrounding the epicenter of the blast. In addition to the fission products from the bomb itself, this excavated material is made radioactive by the initial burst of neutrons from the nuclear explosion and will be deposited as fallout.

#### Characteristics of Nuclear EPWs

Because EPWs are intended to detonate below ground and have substantially lower yields than other warheads in the U.S. stockpile, proponents of the development and use of such weapons have suggested that nuclear EPWs could be used even near densely populated areas with "minimal collateral damage." As one Pentagon official put it to the *Washington Post* in June 2000, "What's needed now is something that can threaten a bunker tunneled under 300 meters of granite without killing the surrounding civilian population."<sup>10</sup>

An analysis by one of us (RWN) has demonstrated that EPWs simply cannot penetrate deeply enough to contain, below the ground surface, the nuclear explosion and the radiation it produces.<sup>4</sup> As tests at the Nevada Nuclear Test site have shown, a 1-kiloton explosion must be buried and carefully sealed more than 300 feet (100 meters) below the surface to fully contain the radioactive products. Yet a missile made of the hardest steels cannot survive severe ground impact stresses at velocities greater than about 900 meters per second without destroying itself. This limits the maximum possible penetration depth of the missile into reinforced concrete to about four times the missile length—approximately 12 meters for a missile three meters long. Even for the strongest of materials, impact velocities much greater than one kilometer per second will crumple and destroy the penetrator and its warhead. At this relatively shallow depth, the explosion will inevitably breach the ground surface and throw out radioactive

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dirt and debris. The resulting bare surge of radioactive fallout will extend over an area of several square kilometers. Anyone remaining in this area for more than a few hours would receive a fatal dose of radiation and shorter exposure would cause significant injury, as will be noted in detail below.<sup>4</sup>

#### Dissemination of Chemical and Biological Agents

In addition to the risk of radiation exposure, analysis of the effects of EPWs used on underground storage sites indicates that all the hazardous stored materials are unlikely to be incinerated by an EPW. Instead, some may be disseminated to the ground surface and to the atmosphere.<sup>10</sup> Contemporary bunkers in which such materials are stored typically contain long and complex tunnel systems with multiple storage rooms. This configuration would attenuate the blast and thermal energy of the underground explosion. There is a high probability that some storage tanks would be ruptured by the blast, but that the agents themselves would not be destroyed.

Evidence from the 1991 Persian Gulf War and other examples of the destruction of storage sites indicates the potential for dissemination of the agents by detonation of explosives.<sup>11</sup> In a memo to U.S. Senators in September, 2002, Mello, Nelson, and von Hippel stated: "A nuclear attack would be much more likely to release than to destroy any biological or chemical agent present. Thus, the most likely outcome . . . would be to disperse lethal agents into the atmosphere, potentially killing unprotected civilian populations in a large area downwind. Military forces would be more likely to have protection."<sup>12</sup>

#### Effects of Ionizing Radiation

In previous analyses of the medical consequences of the use of nuclear weapons, consideration of injury from ionizing radiation included (1) the effects of radiation injury from the initial burst of radiation from the nuclear detonation on people who survived the blast and heat and (2) the effects of radiation injury from fallout of the radionuclides produced by the nuclear detonation. One example of the first type of injury is a person who was in an

underground shelter in Hiroshima at the time of the detonation and thus escaped the effects of blast and heat, but died of radiation illness. Other survivors of blast and heat in Hiroshima and Nagasaki suffered injury from the neutrons and gamma rays in the initial radiation flux. Neutron and gamma rays are capable of penetrating shielding and therefore causing radiation injuries at considerable distances from their source. Doses of radiation greater than a few sieverts (hundred rems) can cause radiation sickness characterized by serious illness, disability, or even death. Smaller doses of neutron and gamma radiation may lead to subsequent cancers, as documented by the Atomic Bomb Casualty Commission and its successor, the Radiation Effects Research Foundation, in long term follow-up studies of the survivors of the nuclear bombing of Hiroshima and Nagasaki.<sup>13, 14</sup>

In addition to direct exposure to gamma rays and neutrons produced by the detonation, people may ingest or inhale radionuclides from fallout either locally or at a great distance from the epicenter of the detonation. Inhaled or ingested radionuclides that emit alpha or beta radiation can seriously injure tissues close to their location in the body. The National Cancer Institute has published information estimating the number of thyroid cancers in the United States produced by the absorption of short-lived radioactive iodine-131 from atmospheric nuclear tests conducted by the US and the Soviet Union.<sup>15</sup> The fallout of radionuclides was one of the reasons for the banning of nuclear tests in the atmosphere by the 1963 Limited Nuclear Test Ban Treaty.

The ground radioactivity after a 1-kiloton shallow-buried explosion would be distributed over a few square kilometers in high concentration. About 60% of the radioactivity is deposited locally at high dose rates, and more than half the radioactivity will descend in the first 24 hours. Meanwhile, the winds will determine the distance that the fallout will carry, with debris likely distributed over a wide area.

Figure 1 shows the approximate radiation isodose contours due to fallout from a 0.43 KT underground nuclear test.<sup>16</sup> The buried depth of 34 meters reduced the total radioactivity released, but people within the innermost contour would nonetheless

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Figure 1. Radiation isodose contours due to fallout from a 0.43 kiloton underground nuclear test. Fatalities and acute radiation illness would be expected within the first two contours as the result of a comparable radiation release from a nuclear earth-penetrating weapon. (Source: R. Nelson)

have received a radiation dose of 1,000 rads per hour or more, and those within the second contour would have received a radiation dose of 100 rads per hour. A dose of 1,000 rads per hour would cause radiation sickness in the majority of victims in about 10 minutes and fatal injury in about 45 minutes. A dose of 100 rads per hour would be likely to produce radiation sickness in one to two hours and fatal injury in four to five hours. Those exposed would have to leave the area of exposure — or be evacuated from it — as quickly as possible. Of course, victims may be injured or trapped by the debris produced by the heat and blast, or will be busy attempting to rescue others. Since radiation is invisible and its detection requires radiation-sensitive badges or other monitors, such victims may be totally unaware of their exposure to radiation and its magnitude. Once such people have made it out of the area, their clothing and other repositories of radioactive material would have to be removed and taken to a safe distance so as to avoid additional radiation exposure to the victims or to others. The victims would also need access to showers — with protected drainage — that could remove par-

ticulate radioactive matter from skin and hair. (An isodose contour map such as the one shown, overlaid on a metropolitan map of Baghdad, Pyongyang, Damascus, Teheran, or any other potentially targeted urban area, would permit a rough quantitative estimation of the large number of civilian casualties that would result from nuclear EPW use.)

#### Medical Consequences of Radiation Exposure

Radiation injury affects multiple organ systems; the range, intensity, progression, and duration of symptoms are functions both of the exposure dose and the type of exposure — gamma rays or neutrons, or radionuclides that affect specific tissues in which they are concentrated, such as strontium-90 in bone and I-131 in the thyroid gland. These exposures may result in cancers that become apparent years after the exposure.

With regard to acute radiation sickness, cells in mitosis and those with higher levels of metabolic activity are more radiosensitive than others. Hence, rapidly proliferating cells such as lymphocytes,

Medact, Dr. E. Waterston  
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erythroblasts, and intestinal crypt cells are affected more extensively than highly differentiated muscle and nerve cells. Since epithelial cells are particularly vulnerable, first symptoms often reflect damage to the gastrointestinal tract, with protracted vomiting, diarrhea, and fluid and electrolyte loss. Bone marrow (white cells) and other immunological defenses are also vulnerable, and profound anemia, hemorrhaging, and secondary infection are common phenomena. For those exposed to lethal doses, death may take several days to a week or more to occur.

It is the damage to the blood-forming tissues and the gastrointestinal tract that largely determines the fate of individuals exposed to moderately large doses of total body radiation. When the dose is over 2 sieverts (200 rem), nausea and vomiting are virtually immediate symptoms, accompanied by a loss of appetite and diarrhea in about a third of those exposed.

After the early symptoms — the so-called “prodromal” syndrome — the lethal response is characterized by three modes of death. At doses of 20 to 150 sieverts, the terminus is a matter of hours to days, from neurological and cardiovascular breakdown. At levels of 5-12 sieverts, the gastrointestinal syndrome produces progressive deterioration over a period of days to weeks. Even at a lower dose, on the order of 2-4 sieverts, death may occur several weeks after exposure as a result of bone marrow failure.<sup>17</sup>

The immediate reaction is not accompanied by a change in the white count in the first few days. With the destruction of the precursor cells or stem cells, there is a decreasing quantity of available red cells, white cells, and platelets. But the real evidence of radiation sickness becomes apparent when the circulating cells are depleted and the replacements are not forthcoming from an inactive marrow. At this point, a few weeks after the exposure, fever, chills, oropharyngeal ulcers, and anemia develop as a consequence of infection and marrow depression.<sup>18</sup>

Infants, children, the elderly, the chronically ill, and women of reproductive age are especially vulnerable. These populations may be already vulnerable due to disease or malnutrition. In Iraq infection and malnutrition may be a consequence of the effect on

water and food supplies and the destruction of the medical and sanitation infrastructure by the 1991 bombing and as a consequence of food shortages because of United Nations sanctions and the response of the Iraqi government. Radiation injury accompanied by exposure to blast or burn has a synergistic effect. Other synergistic effects may be caused by the deleterious combination of suppression of immune response by radiation and dissemination of infectious agents.

There are no specific therapies for acute radiation injury; supportive treatment (intravenous fluids, blood transfusions, antibiotics) is all that can be offered. Even with available modern antibiotic therapy — and the appropriate drugs are not always at hand — infection is an important cause of death. For those sub-lethally exposed, such measures may be crucial in permitting survival through acute illness and lead to eventual recovery. Even in such cases, longer term effects may occur subsequently. In most cases, there will be no way for physicians to determine the level and type of radiation exposure in any individual patient. Effective triage, separating those who are certain to die from those for whom recovery is a possibility, will therefore be impossible. Unless hospitals, clinics, and other sources of medical care have adequate decontamination facilities, physicians, nurses, and other health workers will themselves be at risk for radiation exposure from patients' contaminated clothing.

Given the time course of radiation injury and illness, the effects of even a single exposure of the type most likely to result after the explosion of a nuclear EPW as described above will occur over a period of weeks, rather than as an acute, self-limiting event. If the treatment resources are available, the central problems of infection and hemorrhage may be managed successfully in a significant number of patients.

#### Synergistic Effects and Medical Responses

It is important to note that the use of nuclear EPWs targeted on underground bunkers in or near urban areas is likely to be accompanied by other military actions — simultaneous conventional air strikes, helicopter gunship assaults, or infantry combat.

Medact, Dr. E. Waterston  
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These combinations are likely to increase panic, prevent any semblance of orderly evacuation, and vastly increase civilian casualties.<sup>19</sup> As a consequence, traumatic injuries – in addition to the effects of radiation exposure – will make the demand for medical care overwhelming. The availability of medical care facilities, personnel, supplies and equipment, and the functional status of the entire medical care system, are likely to be affected. Blood and fluid supplies, including whole blood, packed red blood cells, platelets, plasma, albumin, and Ringer's lactate, as well as bandages, intravenous solutions and injection sets, antibiotics, and anesthetics may be needed. Hospitals may be crippled by interruption of water and sewage pumping, disruption of telephone and other communication systems, destruction of electrical power grids, and damage to transportation systems, as they were during the 1991 Persian Gulf War.

#### Escape and Evacuation

Analysis of the possibility and speed of escape and of evacuation depend on a number of factors: (1) mobility of the victims; (2) availability of transport; and (3) barriers to flight or evacuation caused by physical damage to victims or to transport systems, or by panic. Most of the total radiation dose received from fallout occurs in the first few hours after the detonation. In New York City, for example, a low-yield nuclear EPW detonated at the southern end of Central Park during a weekday would require the rapid evacuation of millions of people. In Baghdad, which has a population density greater than that of New York City, even more people would have to be evacuated from any affected area.

Extensive analyses of the problems of escape and evacuation were conducted during the 1950s and 1960s when it was alleged that "civil defense" could be an effective response to the use of nuclear weapons.<sup>20</sup> Among the findings of those analyses was the prediction that much of the "evacuation" would be spontaneous and uncontrolled. Uncontrolled evacuation from the site of a nuclear EPW explosion could not only lead to confusion, congestion, and long delays, but, in cases where "bunker busters" were used against underground biological weapons facilities, could possibly lead to the exposure of more

people to biologic agents capable of person-to-person transmission.

#### Weakening of the Restraints Against the Use of Nuclear Weapons and of Other Weapons of Indiscriminate Mass Destruction

The effort by nuclear advocates to introduce new low-yield nuclear weapons into the U.S. arsenal is part of a growing trend to lower the nuclear threshold and make the use of nuclear weapons more acceptable. Proponents have argued that small nuclear weapons could be used in otherwise conventional conflicts because they minimize collateral damage. Our analysis shows that this is not true.

Furthermore, the use of low-yield nuclear weapons may lead to weakening the restraints against the use of nuclear weapons of greater yield and in other environments, such as in the air, underwater, and in space. Further development of new nuclear weapons such as EPWs by the United States may require renewed underground nuclear testing, breaking the current world moratorium and destroying prospects for eventual universal accession to the Comprehensive Test Ban Treaty (CTBT). It would almost certainly fuel a new cycle of global nuclear weapons proliferation as other nations respond with their own new weapons.

The U.S. currently enjoys overwhelming conventional military superiority and remains the world's unchallenged superpower. Nuclear weapons still have the capability to threaten large numbers of the U.S. population. The CTBT and other treaties intended to limit the proliferation of nuclear weapons to other states greatly increases U.S. security. The development of new nuclear weapons, with new designs that have to be tested, would ultimately undermine not only U.S. national security but global security as well.

Medact, Dr. E. Waterston  
Page 10 of 10

#### About the Authors

Victor W. Sidel is Distinguished University Professor of Social Medicine, Montefiore Medical Center, Albert Einstein College of Medicine. He is a former Co-President of IPPNW and a founding member and past President of its US affiliate, Physicians for Social Responsibility (PSR).

H. Jack Geiger is Arthur C. Logan Professor Emeritus of Community Medicine, City University of New York Medical School. He is a founding member and past President of PSR.

Herbert L. Abrams is Professor of Radiology, Emeritus at Stanford University and Member-in-Residence at the Stanford Center for International Security and Cooperation.

Robert W. Nelson is a theoretical physicist at the Program on Science and Global Security, Woodrow Wilson School of Public and International Affairs, Princeton University.

John Lorenz is Program Director, International Physicians for the Prevention of Nuclear War.

#### References

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Menteer, Ellen  
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Miles, Del  
Page 1 of 3

00824  
RECEIVED MAY 19 2004

*Ellen Menteeer*  
2503 Davis Court  
Mountain View, California 94043-4109  
May 17, 2004

Mr. Tom Brim  
Document Manager  
NNSA Livermore Site Office L-295  
7000 East Ave.  
Livermore, CA 94550-9234

Dear Mr. Brim:

I was sorry to hear from Tri-valley cases, that Livermore has plans to expand its destructive potential. This was very far beyond to be given the chance of developing clearly and highlighting lethal weapons, the possibility of nuclear attack, accident, or (beyond policy) deliberate intrusion, to say nothing of actual war (!) put your neighbors at risk. If you were a mother, people would have more ability to object.

The question of arms, is not personal to you. You're doing your job.

*Sincerely yours*  
Ellen Menteeer

1/04.01

Good afternoon.

I'm Del Miles. My wife and I have lived in Livermore for 38 years. A month ago I was one of 10 TV CAREs members who spent 3 days in Washington DC lobbying congressmen and their aides regarding nuclear issues.

Today, NOW, let's focus our attention on how DOE's projected activities would affect our thinking. How these activities would effect how we see ourselves, and others.

As an analogy, picture ten men in a circle, ten men who represent all men everywhere. Each one has a different perspective of life. Each one knows he is right.

Lets give one man, any man, a rifle, and wait.

His whole countenance rises. He becomes even more confident that he is "right". For himself and others, he decides its time to get people organized, according to his own particular plan, obviously the best way to do it. Alex the Great. Genghas Khan. Napoleon, Hitler. Millions of men with rifles have set out to improve the world, according to their plan. Those with a rifle embolden a cause, their particular cause.

The cause of capitolism and democracy may not fit everyone throughout the world. The English and we have been struggling with democracy for 800 years. Women didn't get the vote till 1920. Only half of eligible Americans vote. Millions of Americans live w/o adequate health care or education. Rather than being out to save the world with our armies, perhaps we need to save ourselves. The power of a rifle may not be the most appropriate tool. Roman armies were always marching, but Rome fell from within

Our annual military expenditure is as much as for all the rest of the world combined. The mightier our military becomes, the more confidence we have in being "right", and in going it alone. The "rights" of others are increasingly ignored, and increasingly they fight back, whether they be terrorists, or allies who disagree. In 1970 we promised non nuclear nations that in return for their not developing nuclear arms, we would not increase the power of ours. We've been increasing the power of ours. We are a proud nation, where being powerful is equivalent to being right.

Once a man has a rifle he doesn't give it up easily.

1/04.01 | My plea to you is that we not increase the power of our rifle and of our righteousness.

Miles, Del  
Page 2 of 3

Miles, Del  
Page 3 of 3

- 2/01.01 | Let's set an example for non nuclear nations, by scaling down our own weapons systems.
- 3/02.01 | Lets not do research to design new pits for nuclear weapons.
- 4/34.01 | Let's not produce tritium targets for the NIF, and thus new weapons systems.
- 5/07.01 | We need civilian science programs.
- 6/39.01 | Let's not do the diagnostics for renewed underground nuclear testing.

Does might make right?  
Others may be just a "right" as we are. We are not perfect either.

3/02.01 | Please. No new designs for nukes.  
cont.  
Thank you for your attention.

Some 200 years ago our forefathers spent a long hot summer in Philadelphia to devise a plan to prevent one group from becoming predominant over others. Their "checks and balances" procedure gained America much respect and admiration worldwide, because the world has always had trouble with dominant groups.

*This is a copy of my comments  
made Tuesday May 27 at the  
Double Tree Hotel in Livermore.  
Del Miles*

Moeller, Rebecca  
Page 1 of 1

Moon, Donald W.  
Page 1 of 1

 **Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement**  
U.S. Department of Energy  
National Nuclear Security Administration



**Written Comment Form**  
*Must be received on or before May 27, 2004*

1/02.01 I attended the public hearings in Livermore on April 27, 2004. Due to the large number of people wishing to comment and the lateness of the hour when I left, and had still not spoken, I am submitting these comments in writing only. I wish to state my opposition to the research and development of nuclear weapons at the Livermore Lab which violates the obligations and agreements of international law - specifically the Treaty on the Non-Proliferation of Nuclear Weapons.

2/04.01 The increase of autonomy and development of prototype nuclear weapons clearly represents vertical proliferation. The scientific staff of Livermore that must discover how to warm and safely dispose of the current arsenal of weapons. And additionally clean up the toxic chemicals that have entered the air, soil & water from their past work. Apparently this work should be sufficiently challenging that it has been unable to be conducted peacefully and to date.

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

Rebecca Moeller  
Santa Cruz, CA

-----Original Message-----  
**From:** Donald W. Moon [mailto:dw\_moon@comcast.net]  
**Sent:** Sunday, April 25, 2004 10:05 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:** livermore publications re: the Lab.

Dear Mr. Grim:

I am troubled by statements in local publications about operations at LLNL. I retired from the lab about 10 years ago. I have tried to contact one of the "letters to the editors" regarding Tritium and found that the stated telephone number was for the "Holiday Inn Express--Tracey". Next, I am trying to contact you. I also suspect that the information is bogus.

If you receive this email--I refer you a Newspaper "The Independent" April 22, 2004 editorial page 4. It includes a "Mail Box" letter from Mary Perner, Livermore. She has NO listed phone number in Livermore.

The entry is nothing but a scare tactic--stating half-truths and claims of scientific truths-- which have nothing to do with reality.

I would like to know that you are aware of this trash. I would like to receive an email "Got it, Working on it" from you. The editors of "The Independent--Mailbox" should be put on notice. How can LLNL do its job in such an hostile environment?

Regards, Donald W. Moon

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

Moore, Charles V.

Page 1 of 1

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

**From:** moore [mailto:cvmoore@fea.net]**Sent:** Tuesday, April 27, 2004 12:04 PM**To:** tom.grim@oak.doe.gov**Cc:** Nancy Steinbock**Subject:** Proposed EIR for next 10 years

1/04.01 | This nation should be decreasing it's Weapons of Mass Destruction Programs, not increasing them. What are they going to be used for?.

The plan looks like an attempt to maintain and enlarge a bureaucracy that should be decreasing its activities.

Charles V. Moore, Laguna Woods, CA

Moore, Patricia

Page 1 of 3

April 23, 2004

01055  
RECEIVED MAY 26 2004

Mr. Tom Grim, Documents Manager  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Dear Mr Grim-

My name is Patricia Moore and I am a resident of Livermore, CA and a member of Tri-Valley CARES. I am a medical social worker and worked for 8 years in outpatient Hospice organizations. I have worked as a counselor with many 100's of dying patients and their families. My concern today is with environmental toxicity, specifically radioactivity, and its' impact on human health. As a health care worker, I have witnessed the ravages of terminal illness on children, teens and young adults, and have had to question why so many people are suffering and dying prematurely. Many times my patients suspected that they had developed their disease due to toxic exposure (Agent Orange, agricultural pesticides, chemicals, radiation) but they were not able to prove their cases.

1/04.01 | Given the overwhelming evidence of the health hazards of radioactive substances, I am shocked by Livermore Lab's 10 year plan to increase the administrative limit of plutonium by more than 100%, to revive the plutonium vaporization project, to manufacture tritium targets, and to increase by ten-fold the lab's day-to-day work with tritium.

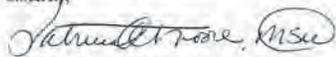
2/25.05 | It is known that a person inhaling a few micrograms of plutonium, a microscopic amount, is likely to develop a fatal lung cancer 10 to 20 years after exposure. At some point, the cells damaged by alpha radiation begin to multiply uncontrollably. If we were subject to an earthquake or a terrorist attack or a local transport accident or a theft or a mistake on the part of a worker, the extremely combustible plutonium (which is also subject to spontaneous combustion) could burn and would produce tiny aerosol particles of plutonium, of respirable size, which can easily enter and lodge in the lungs. Livermore is a city and an area of enormous population growth, with many housing developments springing up all around the Lab. This is also a thriving agricultural region of grapes and cattle and olives and wine. How can the DOE and the Lab even consider ramping up programs with known carcinogens that can never be disposed of and that have a half-life of 24,000 years? The Integrated Technology Project states that there will be "a greater amount of material use, storage and transportation" of plutonium, right here near a population center of 7 million people.

3/23.02 | Tritium is much more radioactive than weapons-grade plutonium, and apparently the gas can escape easily during routine operations, or if there were an accident scenario. When released into the environment, it binds to water molecules and becomes biologically

Moore, Patricia  
Page 2 of 3

3/23.02 cont.	<p>toxic.<sup>1</sup> Tritiated water (HTO) is a common chemical state of tritium and according to the National Academy of Science it has easy and rapid access to living cells, including those of the embryo or fetus. According to the NAS study of low-level ionizing radiation, tritiated water induced significant decreases in relative weights of the brain, testes and ovaries when exposure (estimated at 3 rads per day) began at the time of the mother's conception. Even lower exposures (0.0003 rads per day and 0.03 rads per day) were implicated in the induction of behavioral damage, such as delayed development of the righting reflex (balance) and depressed spontaneous activity.<sup>2</sup></p>
4/16.01	<p>There is also evidence that the low level radiation from tritium can interfere with the human master-code mechanism for DNA. And so far, there is no indication that this master-code mechanism has an ability to repair itself when damaged by tritium.<sup>3</sup> Further, it has been shown that tritium interferes with cell membrane systems. The lab already had two large accidental releases during the Cold War and there is evidence, even in your reports, that there are higher-than-normal levels of tritium in local grapes and wine.<sup>4</sup> It is illogical to assure us of our safety given the history of the Labs' spills, releases and leaks. Accidents will always happen.</p>
5/23.01, 23.02	<p>I believe that manmade radioactive (as well as chemical and biological) pollutants in the environment must be minimized to ensure a healthy future for the earth's inhabitants. Research shows that cancer is only the tip of the iceberg for the genetic damage done by ionizing radiation. It is well known that radiation is a co-factor in many diseases, especially those diseases which are induced by free radical damage.<sup>5</sup> Radiation exposure also accelerates the aging process. According to the late John Goffman, no "safe level" of radiation exposure exists, although the EPA and NRC have set up "working" measurable standards. The Lab is already a Superfund cleanup site (which the current U.S. Administration wants to downplay), and there are currently 900-1000 pending health claims against the DOE from workers at Livermore Lab.</p>
6/07.01	<p>My work with hundreds of dying people and their families made me realize how short our lives are and how fragile and precious life is. Why are we here on earth and what is most important? There are great minds and talents in the scientific community. Let's turn the focus away from generating more toxic and radioactive pollution, away from unnecessary diseases and health problems, away from global nuclear proliferation and toward the resolution of the serious global problems that face us. Please consider revising</p>
	<p><sup>1</sup> <u>Health Physics</u>, Vol. 36, 283-7, Radiation Effects of Tritiated Seawater on Development of the Goose Barnacle, Pergamon Press Ltd., 1979</p> <p><sup>2</sup> <u>National Academy of Science</u>.</p> <p><sup>3</sup> <u>New Scientist</u>, DNA: 50 Years of the Double Helix, Philip Ball, March 2003</p> <p><sup>4</sup> <u>LLNL Yearly Environmental Report</u></p> <p><sup>5</sup> <u>Free Radicals in Biology and Medicine</u>, B. Halliwell and J.M.C. Gutteridge, Oxford Press 3<sup>rd</sup> Edition</p>

Moore, Patricia  
Page 3 of 3

6/07.01 cont.	<p>the alternatives analysis to include conversion of Livermore Lab to civilian sciences and to the cleaning up of existing radioactive materials.</p>
	<p>Sincerely,  Patricia A. Moore, MSW 23 Diamond Drive Livermore, CA 94550</p>
	<p>Cc: Senator Diane Feinstein, Senator Barbara Boxer and Representative Ellen Tauscher</p>

Mueller, Lynn  
Page 1 of 1

Multiple Signatory Letter 1  
Page 1 of 1

-----Original Message-----  
From: Lynn Mueller [mailto:lsmueller@yahoo.com]  
Sent: Sunday, May 30, 2004 7:44 PM  
To: Mr. Tom Grim  
Subject: Proposals at Livermore Lab

Lynn Mueller  
1173 Sutter Street  
Berkeley, CA 94707

May 30, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/02.01 I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

2/04.01 I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

3/07.01 Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Thank you for considering my comments.

Sincerely,

Lynn Mueller

Fremont, California  
May 7, 2004

Mr. Tom Grim  
Document Manager,  
NNSA Livermore Site Office, L-293  
7000 East Ave.  
Livermore, California 94550-9234

Dear Mr. Grim,

1/04.01 The recently-released Site-Wide Environmental Impact Statement (SWEIS) for the Lawrence Livermore National Laboratory lays out plans for huge increases in nuclear Weapons design and manufacture in Livermore over the next ten years which we, the undersigned, feel are alarming.

A doubling of the amount of highly-toxic plutonium on-site, and a tripling of the amount allowed "at-risk" at one time. A ten-fold increase in allowable tritium "at-risk". Dangerous new experiments with plutonium vapor clouds, and small-scale fission in the NIF mega-laser. All of this, sandwiched between two earthquake faults, less than 40 miles from seven million people in the Bay Area.

2/03.01 To say we are disappointed with these plans for further development of nuclear weapons here in our area is putting it far too mildly. We feel that the failure of the recent war in Iraq is plentiful evidence that war, no matter how highly sophisticated the weapons developed, is not a reasonable solution to the social and political conflicts in the world. And to pour millions of dollars into the further development of such weapons does absolutely nothing to secure the safety of our nation or the stability of the nations of the world.

3/25.01 Secondly, the danger that such nuclear weapons design and manufacture brings to us in a very densely populated region threatened constantly by the possibility of earthquakes seems to us to be most irresponsible.

1/04.01 We strongly oppose these plans and urge you to take into consideration the feelings and concerns of the people of the Livermore and greater Bay area in your determinations.

cont.

Thank you Sincerely,  
Ellen M. Cunningham  
Mary Jo Conant  
Catherine D. Reilly  
Lester Jean Matthew Smith  
Patricia M. Walsh  
Ruth E. Henschke  
Eleanor A. Kosciuszko

Debra Soboron  
Linda Marie Brown  
Marlene H. Corrigan  
Lynell P. Soga  
Peggy Jeanne Barron

**Multiple Signatory Letter 2**  
**Page 1 of 3**

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

From: Tara Dorabji [mailto:tara@trivalleycares.org]  
 Sent: Wednesday, May 12, 2004 9:58 AM  
 To: Tom Grim  
 Cc: Bert Heffner  
 Subject: Request for DOE to give a 30 day extension on public comment on LLNL SWEIS

May 11, 2004

Mr. Tom Grim  
 DOE, NNSA, L-293  
 7000 East Avenue  
 Livermore, CA 94550  
 Tom.grim@oak.doe.gov

RE: Request for a 30 Day Extension for Public Comment on the Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (LLNL SW/SPEIS)

Dear Mr Grim:

1/31.02

The Public Hearings on the LLNL SW/SPEIS held in Livermore, Tracy and Washington DC on April 27, 28 and 30 were attended by at least 450 people. The hearings and the resulting media coverage were the first opportunity many people had to learn about the proposals. Many of these people and others have contacted Tri-Valley CAREs to receive copies of the LLNL SW/SPEIS and additional information in order to submit written comments. The outpouring of public response to this complex document clearly shows the need for an extension of the public comment period by thirty days.

The technical nature and length of the SW/SPEIS document makes it necessary for people to have more time to prepare written comments. On behalf of local, regional, national and international groups listed below, we request that the Dept. of Energy extend the public comment period by 30 days from May 27 to June 27.

2/31.06

In addition, Tri-Valley CAREs has requested, but not received, the reference documents used in the SW/SPEIS. The SW/SPEIS lacks critical information that explains the modeling that was used in the accident analysis. The background information requested is necessary to adequately evaluate the proposals in the SW/SPEIS document. We request again the source documents referenced in the SW/SPEIS.

We would appreciate hearing from you by May 18, 2004.

Sincerely,

Marylia Kelley  
 Executive Director  
 Tri-Valley CAREs

Jacqueline Cabasso  
 Executive Director  
 Western States Legal Foundation

**Multiple Signatory Letter 2**  
**Page 2 of 3**

Robert M. Gould, MD  
 President, SF-Bay Area Chapter, Physicians for Social Responsibility and Immediate Past-President,  
 Physicians for Social Responsibility (National)

Diane D'Arrigo  
 Director, Radioactive Waste Project  
 Nuclear Information and Resource Service

Christopher Paine  
 Senior Nuclear Program Analyst  
 Natural Resources Defense Council

Ralph Hutchinson  
 Coordinator  
 The Oak Ridge Environmental Peace Alliance

Jeremy Maxand  
 Executive Director  
 Snake river alliance

Paul Leventhal  
 Founder and President  
 Nuclear Control Institute

Lorraine Krofchok  
 Director  
 Grandmothers for Peace International

Sandra Schwartz  
 Peace education coordinator  
 American Friends Service Committee

Pamela Silvola  
 Co-Chair  
 Committee to Minimize Toxic Waste

Tom Clements  
 Nuclear Campaigner  
 Greenpeace International

Peggy Maze Johnson  
 Executive Director  
 Citizen Alert

Tom Carpenter  
 Executive Director  
 Government Accountability Project

Jay Coghlan  
 Executive Director  
 Nuclear Watch of New Mexico

**Multiple Signatory Letter 2**  
**Page 3 of 3**

Jane Williams  
 Executive Director  
 California Communities Against Toxics

Louis Zeller  
 Campaign Coordinator  
 Blue Ridge Environmental Defense League

Robert K. Musil PhD MPH  
 Executive Director and CEO  
 Physicians for Social Responsibility

Joni Arends  
 Executive Director  
 Concerned Citizens for Nuclear Safety

Winnie Deitweiler  
 Board Member  
 Sacramento Area Peace Action; and

Joan B. Lee  
 Legislative Liaison  
 California Gray Panthers

CC: Bert Heffner, LLNL  
 CC: Senator Feinstein  
 CC: Senator Boxer  
 CC: Representative Tauscher  
 CC: Supervisor Haggerty

—  
 Tara Dorabji  
 Outreach Director  
 Tri-Valley CARES  
 www.trivalleycares.org  
 tara@trivalleycares.org  
 ph: (925) 443-7148  
 fax: (925) 443-0177

Before the word, was the silence. In this silence existed neither thought nor judgment

Attachment converted: Macintosh HD:Grim ltr request comment ex.doc (WDBN/MSWD) (0003D627)

**Multiple Signatory Letter 3**  
**Page 1 of 1**

Fremont, California  
 May 7, 2004

Mr. Tom Grim  
 Document Manager,  
 NNSA Livermore Site Office, L-293  
 7000 East Ave  
 Livermore, California 94550-9234

Dear Mr. Grim,

1/04.01 The recently-released Site-Wide Environmental Impact Statement (SWEIS) for the Lawrence Livermore National Laboratory lays out plans for huge increases in nuclear Weapons design and manufacture in Livermore over the next ten years which we, the undersigned, feel are alarming.

A doubling of the amount of highly-toxic plutonium on-site, and a tripling of the amount allowed "at-risk" at one time. A ten-fold increase in allowable tritium "at-risk". Dangerous new experiments with plutonium vapor clouds, and small-scale fission in the NIF mega-laser. All of this, sandwiched between two earthquake faults, less than 40 miles from seven million people in the Bay Area.

2/03.01 To say we are disappointed with these plans for further development of nuclear weapons here in our area is putting it far too mildly. We feel that the failure of the recent war in Iraq is plentiful evidence that war, no matter how highly sophisticated the weapons developed, is not a reasonable solution to the social and political conflicts in the world. And to pour millions of dollars into the further development of such weapons does absolutely nothing to secure the safety of our nation or the stability of the nations of the world.

3/25.01 Secondly, the danger that such nuclear weapons design and manufacture brings to us in a very densely populated region threatened constantly by the possibility of earthquakes seems to us to be most irresponsible.

1/04.01 We strongly oppose these plans and urge you to take into consideration the feelings and concerns of the people of the Livermore and greater Bay area in your determinations.

cont. Thank you. Sincerely,

*Cecilia Schaefer*  
*Mary Virginia Leach*  
*Kathleen McAvoy*

Multiple Signatory Letter 4  
Page 1 of 4

Multiple Signatory Letter 4  
Page 2 of 4



P. O. Box 6574  
Albany, CA 94706  
Phone (510) 233-0915

5-27-2004

---

**EAST BAY PEACE ACTION BOARD**  
Betty Brown  
Mike Friedrich  
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Rita Perry  
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Attention (to) Mr. Thomas Grim

Enclosed you will find  
3 pages of comments on the  
SWEIS to LLNL, signed  
by all the board members  
present at our board meeting  
on 5-27. The same comments  
were transmitted by e-mail  
2 days earlier. You might  
note a few corrections of  
typos on the enclosed hard  
copy - EBPA is a 100%  
volunteer organization and  
due to time pressure there  
was not a good proof reading.

Yours for a Nuclear Weapons  
Free and Peaceful World.

Dale Nesbitt\* for EBPA

\* Retired Staff Scientist LLNL

Subject: Comments on the SWEIS for LLNL

To: Mr. Grim; L-293 U.S. DOE, National Security Administration, Livermore Site Office, SWEIS Document Manager, 7000 E. Ave., Livermore, CA 94550-9234. e-mail, tomgrim@oak.doe.gov

From: East Bay Peace Action

Dear Mr. Grim:

These comments will be presented in two major parts, (A) comments about the overall present nuclear weapons policy of the US government and (B) comments explicitly with regard to LLNL. We are fully aware that comments not applicable to the specific site, i.e. LLNL will probably be ignored. We are also fully aware that this is a deliberate policy to avoid the EIS procedure from ever being applied to the overall policy - exactly where it is the most critical. However we choose to make these comments anyway for two reasons, first because they NEED to be addressed and second in hopes that at least some individuals involved in this process will start to have some personal misgivings about their personal complicity in the illegal, immoral and counter productive policies as detailed in the present 'US Nuclear Posture Review'.

(A) Comments on the overall Nuclear Posture Review (NPR):

This review calls for an aggressive modernization of nuclear weapons and a renewed manufacturing base for nuclear weapons. Basically it calls for the US to increase its already huge advantage over the entire rest of the world in the area of nuclear weapons. We vigorously oppose this for three major reasons.

(1) First we feel, and many independent international legal experts agree, that it is ILLEGAL, under our own laws. Specifically The Non Proliferation Treaty (NPT) in article VI states "Each of the parties to the treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control" This treaty has been ratified and thereby becomes under our constitution the law of land. It is, or should be, obvious to every one that the NPR clearly violates our NPT obligation. At least be honest and formally withdraw from the treaty. In addition the United Nations charter along with the World Court opinion reinforces our belief that Nuclear Weapons are illegal and need to be eliminated - not enhanced!

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Multiple Signatory Letter 4  
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1/01.01 cont. (2) Second, we feel, that the present US nuclear policy is Counter Productive! How can anyone state with a straight face that our policy will not increase the probability that other countries will feel that to protect themselves they need to acquire nuclear weapons or other forms of weapons of mass destruction? Does anyone need any other example than North Korea! In addition the NPR is, we believe, counterproductive in its calling for modernization of weapons and enhanced manufacturing capabilities for one simple technical fact (and one that we challenge anyone to refute with proof). This is that it is much easier, both in time and money, to duplicate any technical development than that required for the initial development. And this is true even if the details of the development are effectively keep secret.

2/32.04 (3) The third major reason we object ~~to~~<sup>to</sup> the NPR is a Moral one. We believe that all weapons of mass destruction, and especially nuclear weapons are Immoral. Others, based upon hearing many of the oral presentations, have spoken elegantly of this so we will not expand further.

(B) Comments on the SWEIS for LLNL:

Again while we feel that all of the above comments should be addressed in the SWEIS, and some will be referred to in the following; there are indeed critical SITE specific issues that need to addressed honestly! Some of them follow:

3/30.02 (1) We have very serious concerns about security at LLNL with storing and using dangerous nuclear materials. We are familiar with the very poor record of LLNL in this regard in the past. It is we feel significant that the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform in a recent hearing heard testimony about "insurmountable problems with plutonium and highly enriched uranium at ...LLNL." Further even DOE secretary Abraham has publicly expressed concern and made a commitment to consider removing the special nuclear materials at LLNL by 2005. An yet the SWEIS calls for greatly expanding the quantities!@#%&^\*()!! This issue needs to addressed honestly! (we hope that, is possible but have our doubts). We feel outrage that the 5 to 6 million people that live within the arbitrary small 'danger' area of 50 mile radius would be subject to the potential dangers. While we feel, see section A, that the entire program should be scrapped that if it goes forward that all programs using any significant amounts of nuclear material must be removed from LLNL in Livermore. A better alternative location is the Nevada Test Site. We have no doubt that our friends in Nevada do not want any of it either, even the moon is too close. Next for a few comments on individual programs,

6/27.01 (2) The project for perfecting the use of lasers to separate, and concentrate plutonium isotopes is a prime example of the problems, covered under A of a

6/27.01 cont. proliferation potential and the problem that if the US perfects the technology others will be able to duplicate it easier. What other country would be dumb enough to try if we didn't do it first? However the site specific questions that need to be addressed is the very very real danger of health dangers to workers, other LLNL personnel and the general public.

7/37.01 (3) The site specific question on the development of new manufacturing technologies for 'pit' production involve the same questions as raised in (1) and (2). If it presents no potential health and safety problems to employees or the general population it is up to LLNL to prove it!

8/26.01 (4) The plans to add plutonium, highly enriched uranium and lithium hydride to experiments in the NIF raise an issue beyond the same questions as previous covered. The public was feed a line that the NIFs primary purpose was to determine if inertial confinement was a viable approach to Fusion Power production, and that it would not be used to research how to design new types of nuclear weapons. Many of us never believed the rhetoric and now the SWEIS, and other information, makes it clear that the major purpose of the NIF is for Nuclear Weapons research. At least we call for more honesty and less spin.

9/35.01 (5) The plans for building a bio-warfare (BSL-3 level) agent facility at LLNL is a horrible idea. Again while within the limits of this SWEIS we can not have any effect on whether such a facility is built at least there are two major reasons why any such facility MUST not be built at Livermore. The first is safety, again any such facility should not be built in any heavily populated area, again even the moon is too close. Second any such facility must not be within a area closed, or restricted, due to secrecy. All such facilities need to be available to international inspections, even though with our present administration no treaty allowing such is likely.

10/07.01 In summary the plans for LLNL presented in this SWEIS are not only represent a distinct danger to everyone living any where in this area but they also represent a huge waste of OUR tax dollars and an even greater loss in time and creativity of the many talented individuals employed at LLNL. Why not present an alternative for a complete conversion to a research laboratory devoted to peaceful uses - like LBNL!

Signed on 5-27 by all the following board members present, all not present concurred by phone or e-mail communication.

*Mrs. Betty Brown, Chair EBPA*  
*Adrian Rodriguez EBPA Board Member*  
*Wife B. Perry EBPA Board Member*  
*Dale Meadell, EBPA Board member*

Murray, Sarah  
Page 1 of 1

Dear Mr. Grimm,

1/04.01 | I am writing in opposition to  
the Environmental Impact Statement  
on Livermore Labs planned for the  
next 10 years. I am a high school  
in a town less than two hours  
away and I do not agree with  
2/33.01 | your proposed statement. The plan  
will double plutonium limits, and  
3/37.01 | enable the production of more bombs.  
4/17.04 | increase the amount of airborne  
radioactivity, and will be detrimental  
to nearby residents.  
I, and many others are asking  
you to reconsider your statement.

Sincerely,  
Sarah Murray

Namperumal, Srihari  
Page 1 of 3

Namperumal, Srihari  
Page 2 of 3

Srihari Namperumal  
3030 Dohr street  
berkeley, ca 94702

May 25, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

After attending the SWEIS review, the key piece of data that I have not seen is a fair and honest cost/benefit analysis of the scaling up of operations. Below are listed six of the proposed operational expansions. I do not see valid benefits to these increases. Please address my concerns on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01

1. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab. This only eggs on the rest of the world to step up their development and lowers the nuclear threshold.

2/08.02

2. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them. Having these materials so close in the middle of a densely populated suburban/urban area poses serious risks due to both security and transportation.

3/27.01,  
33.01

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project. Again, this plan increases the risk from any accidental release by 3 fold.

4/26.01,  
26.03

3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

5/37.01

4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

6/39.01

5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

7/35.01

6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01

I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01

Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by

Namperumal, Srihari  
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Natural Resources Defense Council, Christopher Paine, Senior Nuclear  
 Program Analyst  
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9/07.01 | proposing new, unclassified programs in environmental cleanup,  
 cont. | non-polluting and renewable energy, earth sciences, astrophysics,  
 atmospheric physics and others. The alternative of a "green lab" in  
 Livermore should be pursued instead of the dangerous nuclear weapons  
 future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Srihari Namperumal

**Another Decade of Wasteful (and Hazardous) Nuclear Weaponneering:  
 Some Observations on the LLNL Draft SWEIS/PEIS**

**Statement of Christopher Paine  
 Senior Nuclear Program Analyst  
 Natural Resources Defense Council**

**April 30, 2004**

In 1989, the year the Berlin Wall came tumbling down, DOE's budget for nuclear weapons activities was \$4.25 billion (about \$5.5 billion in today's dollars). LLNL's piece of that budget was \$577 million or 13.5 %, which is about \$750 million in today's money.

Employment at LLNL stood at 8200 full-time equivalents (FTE's), 49% of whom were supported by DOE's nuclear weapons research, development, and testing program. Another 20% were supported by the DOE Defense Program's classified, weapons-related laser fusion effort, or performed so-called "reimbursable" research for the Strategic Defense Initiative (SDI) and other Department of Defense Programs. That brought the weapons-related employment to 5,740 FTE's, or about 70% of total lab employment.

The Atomic Vapor Laser Isotope Separation (AVLIS) Program and its classified offshoot, the "Special" (i.e. plutonium) Isotope Separation (SIS) project, employed another 1000 FTE's, and the remainder was spread among a smattering of small energy, general science, and biomedical research efforts.

1/27.01 Today, 15 years later, the Berlin Wall has disappeared. So has the Evil Empire of Soviet Communism that built it. So has the Warsaw Pact that defended it. But inexplicably, without rhyme or reason, the DOE budget request for nuclear weapons activities now stands at \$6.81 billion (included allocated administrative overhead costs), far above the Cold War average support level of \$4.2 billion (in current FY 04 dollars). LLNL's piece is a little under \$1 billion, or 14%, above where it was when the Wall came down. Livermore's employment stands at 10,600 personnel, 30% above the 1989 level, and the plutonium AVLIS project has been secretly, and in our view, *illegally* revived.

2/08.01 This is, frankly, a ludicrous situation that could and should have been avoided. In 1995, the Department's own Advisory Board Task Force on Alternative Futures for the Department of Energy National Laboratories (the "Galvin Commission," so named after the retired chairman of Motorola, John Galvin, who chaired the Task Force) recommended a "restructuring of weapon design capabilities" among the three nuclear weapons laboratories, noting that the restructuring would affect "primarily weapons design capabilities, where the largest functional redundancy exists, and specifically Lawrence Livermore National Laboratory."

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2/08.01 cont. The Galvin Commission cautiously recommended that in light of the revised U.S. nuclear posture, including planned reductions to a "a required stockpile of around 5000 weapons" by 2003, — half its current size — LLNL should "transfer, as cost-efficiency allows, over the next five years, its activities in nuclear materials development and production to the other design laboratory." The proposed restructuring would also have included transfer of LLNL's "direct stockpile support" [of weapons] to the other weapons laboratories "

The Clinton Administration, to its lasting discredit, failed to act on this recommendation when the political door to significant denuclearization was still open, both here and in Russia. The result has been the steady restoration and expansion of redundant nuclear weapons capabilities at Livermore, duplicating similar capabilities at Los Alamos, Sandia, and NTS — in some cases resulting in weapons research and development capabilities *in triplicate*.

As young Americans die in Iraq because somehow there wasn't sufficient funding for body armor kits, or because their Humvees got lost and ambushed for want of readily available GPS-aided tactical navigation and communication systems, I think about this feckless gold-plating of what is now clearly a marginal national security enterprise, and it literally makes me sick.

2/08.01 cont. For example, in this document, NNSA proposes to modernize and significantly expand LLNL's plutonium processing, inventories, and pit fabrication operations, upgrade and expand tritium operations, and build brand new centers for High Explosives Development and "Energetic Materials Processing" at Site 300. All these capabilities already exist in some form at one or more DOE sites.

Los Alamos National Laboratory, for example is already well along in a \$2.5 billion modernization of its plutonium chemistry and pit fabrication facilities, and already has extensive facilities for tritium research and target loading. Both Pantex and Los Alamos already have facilities for formulating weapons high explosives. LLNL's Site 300 flash radiography facilities duplicate those available at Los Alamos and NTS.

3/30.02 Moreover, the Livermore site, hemmed in by suburbs, with hazardous activities densely packed within a 1.3 square mile area that is highly vulnerable to external attack, is hardly the most appropriate place for storing and processing nuclear explosive materials.

2/08.01 cont. In an age when "the network is the computer," perhaps the most egregious example of extravagant redundancy is the recent construction of dedicated nuclear weapons supercomputing centers at all three laboratories, at an average cost, by 2009, of some \$2.92 billion *per laboratory* to equip each with state-of-the-art weapons simulation capabilities. Hasn't anyone in NNSA heard of secure networking?

By pointing out the extravagant redundancies that exist and even growing within today's nuclear weapons gold-plated "stewardship" complex, I do not mean to suggest that Livermore should bear the full or exclusive burden of any consolidation of complex capabilities, but rather that some overall rationalization is urgently needed to reduce

Natural Resources Defense Council, Christopher Paine, Senior Nuclear Program Analyst  
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costs, to free resources for more important defense tasks and deficit reduction, and to present a more reasonable face to the rest of the world.

2/08.01 cont. For example, LLNL has long demonstrated, and is continuing to demonstrate, a comparative advantage over Los Alamos in weapons computing and software development. In a rationalized and restructured complex, shorn of its most egregious redundancies, it could well make sense for Livermore to be assigned the lead laboratory role in supercomputing, and to retain sufficient weapons design competence and "technology base" to continue activities in non-proliferation, nuclear materials detection, homeland security, intelligence support, and verification, while phasing-out or transferring to other sites its weapons plutonium, uranium, tritium, high explosive operations, radiographic hydrotest, and warhead stockpile support functions.

I talk with foreign analysts and reporters frequently, and I can tell you, they are looking at the increasing divergence between NNSA's nuclear weapons excesses and global political realities, and they are really starting to view the overzealous pursuit of nuclear weapons capabilities by this Department with alarm, and a certain measure of revulsion.

In light of the historical background just noted, it is clear that some of the fundamental premises of the current document are simply invalid. For example, the SEIS states:

"The nuclear weapons stewardship goal is to ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile. *Achieving these goals requires the continued operation of LLNL.*" (Draft SWEIS/PEIS, p. S-2)

As a factual matter, the highlighted statement is simply not true. LLNL could be crippled tomorrow by a major earthquake — a not-so-incredible event, by the way — and the United States would still be left with a very robust nuclear deterrent.

4/02.01, 01.03, 08.01

- LLNL-designed nuclear weapons — the W62 and W87 intercontinental ballistic missile warheads, the W84 cruise missile warhead, and the B83 bomb *currently* account for only 20% of the total US "war reserve" stockpile of nuclear weapons, and by 2009 this fraction is likely to sink further, to around 15%.
- The approximately 400 W84 warheads have no delivery system — all Ground Launched Cruise Missiles (GLCMs) were eliminated under the terms of the 1987 INF Treaty — and are not maintained as part of the "active" nuclear weapons stockpile.
- Implementation of the "operationally deployed" strategic force reductions agreed to in the 2002 Moscow Treaty on Strategic Offensive Reductions (SORT) will result in the retirement of all 600 remaining W62 warheads from the stockpile by 2009.
- Within the 10 year period covered by this document, LLNL will have only two warheads types — the W87 and the B83, remaining in the stockpile: the W87 is finishing a major multi-year "Life Extension" program this year (FY 2004), and

Natural Resources Defense Council, Christopher Paine, Senior Nuclear Program Analyst  
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4/02.01, 01.03, 08.01 cont.

renovation of some 650 B83 strategic bomb is not planned within the next five years. But NNSA is pushing advanced development of a "robust" earth penetrating variant of the B83 megaton-range bomb that a near majority in Congress are clearly uncomfortable with. One wonders whether the pressure for this is partly to give LLNL's redundant weaponeers something to do

In sum, over the next five years LLNL will have little bona-fide workload relating to the support of its 1200 actively deployed weapons in the U.S. nuclear stockpile, creating a clear window of opportunity to restructure and consolidate nuclear weapon stockpile support functions at Los Alamos and Sandia Albuquerque national laboratories. Clearly, it makes no sense to maintain a separate \$1 billion per year NNSA weapons program at LLNL to support a mere 15% of US stockpile warheads.

Recognizing that LLNL had little to do for the weapons program other than continuing to hemorrhage billions on NIF construction, a few years ago NNSA again failed to make the rational choice -- phasing out LLNL's residual stockpile support responsibilities -- and instead decided to "redistribute" the stockpile support workload by transferring the W80 cruise missile warhead, a Los Alamos design, from LANL to Livermore!

There has to be a better way to field a nuclear deterrent without returning to the spending levels and programs of the Cold War, and there is. Only you won't find it listed as a "Reasonable Alternative" for detailed analysis in this Draft SEIS. The two alternatives to the "Proposed Action" deemed worthy of comparative analysis -- "No Action" (i.e. continue the status quo are proceed with projects already planned and approved for construction) and "Reduced Operation" -- are in fact not "alternatives" at all, and do not begin to represent a good faith examination of the range of reasonable alternatives, as required by law.

5/31.01, 08.01, 02.01

This assertion is easily demonstrated. **Table A**, based on data presented in the SEIS, compares some salient environmental metrics of the three "alternatives," which turn out to be, not surprisingly, merely minor variations on a theme.

The limited variability in the environmental metrics of these supposed "alternatives" clearly represents an arbitrarily and artificially constrained look, rather than the legally required "hard look" at the range of reasonable alternatives for continued operation of LLNL. There is, for example, no consideration of a "Galvin Commission" like alternative for phasing out redundant weapons R&D and stockpile support functions that are obviously no longer economical or safe for NNSA to conduct at the Livermore site. And note that the level of lab employment for the "Reduced Operations" Alternative, -- 10,000 employees -- is actually higher than it was in 1989, during the last year of the Cold War!

In other words, these so-called alternatives are sham constructs, and they don't begin to reflect a reasonable range of alternatives for LLNL's future role in supporting the missions of the Department of Energy. In fact, three of the Department's most important missions, Nonproliferation, Homeland Security, and Energy Research, are given short

Natural Resources Defense Council, Christopher Paine, Senior Nuclear Program Analyst  
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**TABLE A: A "Reasonable Range" of Alternatives for LLNL?**

	"Environmental Baseline (2002)"	"No Action Alternative"	"Proposed Action"	"Reduced Operation"	Variability (%) from Baseline
Employment					
Livermore site	10,360	10,650	11,150	9,770	-5.7 to +7.6
Site 300	240	250	250	230	-4.2 to +4.2
Non-hazardous Solid Waste	4,500 mt/yr	4,600mt/yr	4,900 mt/yr	4,200 mt/yr	-6.7 to +8.9
Hazardous & Radioactive Waste Shipments (no.)	88	240	310	200	+127 to 252
Sanitary Waste Shipments	518	534	570	492	-5 to +10
Number of Material shipments (radioactive, chemical, & explosives)	470	540	600	550	+15 to 28
Hazardous Waste from Routine Operations	440 metric tons/yr	390 mt/yr	510 mt/yr	300 mt/yr	-32 to +16
Wastewater	300,000 gal/day	310,000 gal/day	330,000 gal/day	290,000 gal/day	-3.3 to +10
Annual Electricity Use	321 M kWh	446 M kWh	442 M kWh	371 M kWh	+15.6 to 39

5/31.01, 08.01, 02.01 cont.

shrift in the "Statement of Purpose and Need" that supposedly underlies the agency's Proposed Action, even though these missions are arguably more important to US national security today than rebuilding or developing nuclear weapons. But nowhere in this document will you find alternatives that are premised on a future concentration *on these missions*, accompanied by a significant contraction of the nuclear weapons effort.

Another obvious defect of the document is that it contains no consideration of the reasonably foreseeable impacts on nuclear weapons proliferation, both vertical and horizontal, from restarting laser isotope separation facilities for weapons purposes, developing detailed physics models and computer algorithms for simulating each stage of the nuclear explosion sequence, and using fissile materials in the National Ignition Facility, a step that DOE expressly denied it was interested in, and essentially lied about, when Congress first provided funds for construction back in 1997.

6/01.01, 26.01

I expect that my colleagues from other organizations may explore some of these issues in greater detail

For Further Information, visit [www.nrdc.org/nuclear](http://www.nrdc.org/nuclear) or Contact: Christopher Paine, 434-989-1603 (cell) 434-244-5013 (Charlottesville, VA office) 434-289-6868 (NRDC-DC office) [chrispaine@earthlnk.net](mailto:chrispaine@earthlnk.net)

Natural Resources Defense Council, Christopher Paine, Senior Nuclear Program Analyst  
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May 26, 2004

Mr. Thomas Grim, SWEIS Document Manager  
Department of Energy/NNSA  
Livermore Site Office, L-293,  
7000 East Avenue  
Livermore, CA 94550-9234

Fax: (925) 422-1776  
Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Draft Site-Wide and Supplemental Programmatic Environmental Impact Statement (SW/SPEIS) for Continued Operation of the Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

1/31.04 By submitting these written comments, we are informing NNSA and the Department of Energy of the existence of serious deficiencies in the above named draft combined SW/SPEIS. If not rectified by the Department, these deficiencies could result in litigation under National Environmental Policy Act (NEPA) to compel both immediate suspension of certain activities that appear to be proceeding in violation of NEPA, and the preparation of separate and substantially revised draft SWEIS and SPEIS documents for public review and comment.

**I. By secretly resuming an AVLIS program for nuclear weapons materials that was terminated 14 years ago, without first preparing, circulating for public comment, and finalizing a timely Supplemental PEIS, DOE has violated NEPA.**

2/01.01, 27.01, 27.02, 27.03, 31.05 The draft SW/SPEIS states (at Appendix N-1) that sometime "in 2000," NNSA's predecessor, the DOE Office of Defense Programs (DP) "determined that there was a need for augmentation of the current inventory of special nuclear materials (e.g., plutonium, enriched uranium) to support the Stockpile Stewardship certification activities. DP directed that the Atomic Vapor Laser Isotope Separation (AVLIS) capabilities be made available for use and the AVLIS facilities be maintained in a state of readiness." The document then goes on to disclose, *for the first time*, that as long ago as May 5, 2000, Lawrence Livermore National Laboratory (LLNL) responded to DP's direction "with a proposal for the development of a low-level AVLIS effort...known as the *Advanced Material Program (AMP)*...to develop and retain the necessary AVLIS equipment and skill set through a series of enrichment demonstrations of the technology."

According to Appendix N, the AMP utilizes facilities and technology originally developed at LLNL in the 1980's - known then as the "Engineering Demonstration System (EDS)" -- for a large scale plutonium AVLIS plant planned for construction in Idaho - known as the Special Isotope Separation (SIS) Plant - to purify fuel-grade plutonium for use in weapons. But the Cold War, the nuclear arms buildup, and the

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Soviet Union itself ended in the period 1989-91, whereupon the putative "need" for additional plutonium for nuclear weapons disappeared.

Facing a tidal wave of weapons retirements, the Department declared itself to be "awash in plutonium," and in 1990 the Secretary of Energy cancelled construction of the SIS plant. "The SIS Program at LLNL was *closed out* and the equipment was placed in standby, with the glovebox de-inventoried and the EDS cleaned of surrogate materials (emphasis added)." Appendix N at p. 4.

As far as members of Congress, the media, other state and federal agencies, and the interested public were concerned, the plutonium AVLIS program at Livermore ended in 1990. When DOE subsequently adopted a comprehensive new strategy and program -- called "science-based Stockpile Stewardship" -- for maintaining the safety and reliability of nuclear weapons in the post-Cold War era without nuclear testing, there was no analysis, nor even a mention, in the September 1996 Stockpile Stewardship and Management PEIS of a potential need to revive the plutonium AVLIS capability at Livermore. Yet this is the very document that NNSA now purports to "supplement" with the *ex post facto* site-specific analysis in Appendix N.

2/01.01, 27.01, 27.02, 27.03, 31.05 CONT. In connection with DOE's "determination," some time between January and May 2000, of a purported agency need for more plutonium and other "special nuclear materials," we note that this determination was made in secret, and that it falls entirely outside the scope of the Stockpile Stewardship and Management Program analyzed in the Stockpile Stewardship and Management PEIS, and implemented in the Record of Decision (ROD) dated published December 26, 1996. Likewise, the secret DOE/DP "directive" in 2000, to refurbish, modernize, and restart the EDS under the new moniker "Advanced Material Program," is not covered by the analysis contained in the 1996 PEIS, nor was it included in the subsequent Record of Decision (ROD) implementing the proposed actions in that PEIS.

In other words, after a hiatus of more than a decade, and without supplementing the existing NEPA programmatic analysis for the Stockpile Stewardship and Management Program, the Department has secretly engaged in a restart of its plutonium AVLIS "Special Isotope Separation" (SIS) program for weapons purposes. The programmatic actions already undertaken, as well as those proposed in the draft SWEIS, clearly have impacts well beyond the Livermore site, and therefore the belated discussion of a subset of these impacts, relegated to an appendix in a particular site-wide EIS, does not meet the requirements of NEPA for timely analysis of programmatic impacts in the proposal stage, *before* an agency undertakes implementing steps that could prejudice subsequent decision-making.

By secretly ordering a resumption of its previously terminated AVLIS program for nuclear weapons materials without first preparing, circulating for public comment, and finalizing a timely Supplemental PEIS, DOE has violated NEPA.

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The Department's attempt to paper over this violation has led to another: a technically and legally unsupportable attempt to artificially segment the analysis of the plutonium AVLIS restart program into separate phases. The first, involving modernization of the mothballed Engineering Demonstration System (EDS) with new pump lasers and its operation using "surrogate materials" and "limited plutonium quantities," is treated as a *fait d'accompli* via inclusion in the NEPA "No Action Alternative." Described as having begun in FY 01, this phase of the restart effort will run through FY 07 and is arbitrarily and capriciously designated the "Advanced Material Program. We are told, "the AMP at LLNL is a research and development project that began in 2001 to conduct a series of laser isotope separation demonstrations on surrogate materials and, on a limited basis, plutonium utilizing modern laser hardware." Appendix N at 8.

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In the second phase, apparently beginning in FY 08, the former EDS facility and "equipment developed [by the AMP] under the No Action Alternative would be used to process sufficient amounts of material as required by the broader SBSSMP [Science-Based Stockpile Stewardship and Management Program]." This phase is arbitrarily and capriciously designated the "Integrated Technology Project," and is included as part of the Proposed Action analyzed in the LLNL-SWEIS.

The artificial and arbitrary character of this division is evidenced by the fact that if one reverses the names of the two program phases or stages, equally accurate appellations result: i.e. "Advanced Material Program," the name given to the already ongoing (illegal) activity, more aptly describes the second phase under the Proposed Action, which is focused on the processing of significant quantities of plutonium and possibly other materials useful in nuclear weapons research, while "Integrated Technology Project," the moniker now given to the Proposed Action, could just as easily describe the technology development activities begun in 2001 with the goal of integrating improved solid state laser technologies into the former Engineering Demonstration System.

Our point is not to make the case that one ordering of the names is better than the other, but only to show that NNSA's entire NEPA construct for resurrecting its Pu-AVLIS program is artificial, arbitrary and capricious, and designed to subvert the purposes and requirements of NEPA.

In support of the approach taken in the SWEIS toward secret resumption of its discontinued plutonium AVLIS program, the Department cites three documents:

- a 14 year old Environmental Assessment entitled *Resumption of Surrogate Testing in the Engineering Demonstration System at the Lawrence Livermore National Laboratory* (DOE/E.A-0421, April 1990) and subsequent Finding of No Significant Impact, or FONSI, (June 11, 1990);
- a five year old *Supplemental Analysis for Continued Operation of Lawrence Livermore National Laboratory and Sandia National Laboratory* (DOE/EIS-0157-SA-01, Oakland Operations Office, March 1999) that predates the DOE/DP determination of the need to revive the Pu-AVLIS program, and makes no reference to it; and

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- a two-year old DOE *National Environmental Policy Act Review of the Advanced Materials Program (AMP), Buildings 161, 332, and 335* (DOE Oakland Operations Office, June 20, 2002) that we strongly suspect may be a brief "categorical exclusion" from further NEPA analysis, but which has been withheld to date from public reading room review or release under FOIA on the grounds that it contains "Unclassified Controlled Nuclear Information (UCNI)."

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Let us consider each of these in turn. The outdated 14 year old environmental assessment and FONSI for a long ago terminated Pu-AVLIS program—prepared in support of nuclear weapons program that has since undergone radical programmatic changes—explicitly supported *only* the resumption of tests using surrogate materials, and further pledged that "any proposed plutonium operations associated with the EDS would require preparation of an EIS and issuance of a Record of Decision." Appendix N at 4. This document therefore cannot possibly be relied upon to fulfill NEPA review requirements for a substantially *upgraded and modified* EDS, performing a *different mission* in support of a substantially *different overall program*, which will process "4 kilograms of plutonium per year" under the Department's purported status-quo alternative of the "No Action" Advanced Material Program. Appendix N at 13.

As noted, the second document does not even refer to the Pu-AVLIS Program, and after all, how could it, when the project had been terminated nine years before and had not been proposed for resumption in the immediately preceding and still operative September 1996 PEIS, or included in the December 1996 ROD implementing a new Stockpile Stewardship and Management Program.

As for the third document, it is difficult to evaluate since it has been withheld from public review, despite the Department's determination, after completing the public scoping phase of the SWEIS, that continued classification of the restart of its Pu-AVLIS program was no longer required, allowing discussion in an unclassified appendix to the draft SWEIS. Summary at 15. However, we strongly suspect that the document in question is probably a "categorical exclusion" or similar bureaucratic device to exempt the ongoing research and demonstration phase of the secretly revived AVLIS program from further NEPA analysis.

This is a shoddy, evasive, and grossly incomplete administrative record for decision-making that we submit cannot withstand scrutiny by any fair-minded Court. The Department cannot even make up its mind whether or not it has actually established a Purpose and Need for the Proposed Action. On the one hand, under the heading "Purpose and Need For Agency Action," the draft SW/SPEIS states, "In 2000, the Office of Defense Programs (DP) determined that there was a need for augmentation of the current inventory of special nuclear materials (e.g., plutonium, enriched uranium) to support the Stockpile Stewardship certification activities. DP directed that the Atomic Vapor Laser Isotope Separation (AVLIS) capabilities be made available for use and the AVLIS facilities be maintained in a state of readiness (emphasis added)."

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We are told that Livermore "responded" to this "direction" by "proposing" an Advanced Material Program "to develop and retain the necessary AVLIS equipment and skill set through a series of enrichment demonstrations of the technology." Appendix N at 1.

However, in its description of the Proposed Action relating to the Pu-AVLIS facilities, the draft SW/SPEIS states: "Any decision to proceed with the Proposed Action is subject to the successful performance of the AMP demonstration *and a determination of Program need.*" Appendix N at 13. But this contradicts the earlier statement that the need for additional special nuclear materials had been "determined" back in 2000, and that DP's secret program direction based on this determination had resulted in the current Pu-AVLIS development and demonstration program included in the No Action Alternative.

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Such conceptual and rhetorical confusion only underscores the fact that *there was and is in reality a single DOE Pu-AVLIS program*, the overall purpose of which was and is to restore Pu-AVLIS capability at the Livermore site, in order to supply particular plutonium and possibly other isotopes to support NNSA weapons development, testing, and computer simulation efforts. These are conducted not only at LLNL, but also at NTS, Los Alamos, and other sites throughout the complex, and thus the resumption of Livermore's Pu-AVLIS program has potential impacts that extend far beyond Livermore. The relative abundance and availability of Pu-242, for example, could have a significant and even dramatic effects on the type of testing activities and projects undertaken at NTS and Los Alamos in future years.

The nuclear materials produced will be utilized in both below- ground and above- ground contained nuclear experiments at NTS and Los Alamos, and the wastes from Pu-AVLIS operations cannot and should not be stored indefinitely within the highly confined and congested LLNL main site within the city of Livermore.

Moreover, the resumption of Pu-AVLIS operations at LLNL could and most likely will undermine US and international efforts to contain the spread of plutonium enrichment technologies that have an inherent capacity for clandestine use in secret or undeclared foreign programs to develop nuclear weapons. In short, the ongoing resumption of a Pu-AVLIS program at Livermore, after a hiatus of 14 years, has broad but as yet unexamined programmatic environmental impacts that demand analysis in a comprehensive and timely Supplemental PEIS.

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**II. The three generic *pro forma* alternatives examined in the SW/SPEIS do not begin to encompass the full range of reasonable alternatives for future operation of LLNL, as required by law.**

In 1989, the year the Berlin Wall came tumbling down, DOE's budget for nuclear weapons activities was \$4.25 billion (about \$5.5 billion in today's dollars). LLNL's piece of that budget was about \$570 million or 13.5 %, which is about \$750 million in today's money.

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Employment at LLNL stood at 8200 full-time equivalents (FTE's), 49% of whom were supported by DOE's nuclear weapons research, development, and testing program. Another 20% were supported by the DOE Defense Program's classified, weapons-related laser fusion effort, or performed so-called "reimbursable" research for the Strategic Defense Initiative (SDI) and other Department of Defense Programs. That brought the weapons-related employment to 5,740 FTE's, or about 70% of total lab employment.

The Atomic Vapor Laser Isotope Separation (AVLIS) Program and its classified offshoot, the "Special" (i.e. plutonium) Isotope Separation (SIS) project, employed another 1000 FTE's, and the remainder was spread among a smattering of small energy, general science, and biomedical research efforts.

Today, 15 years later, the Berlin Wall has disappeared. So has the Evil Empire of Soviet Communism that built it. So has the Warsaw Pact that defended it. So have tens of thousands of deployed U.S. and Russian nuclear warheads, including the bulk of their tactical nuclear arsenals. But inexplicably, without rhyme or reason, the DOE budget request for nuclear weapons activities now stands at \$6.81 billion (included allocated administrative overhead costs), far above the Cold War average support level of \$4.2 billion (in current FY 04 dollars). LLNL's piece is a little under \$1 billion or 14%, above where it was when the Wall came down, Livermore's employment stands at 10,600 personnel, 30% above the 1989 level, and the plutonium AVLIS project has been secretly, and in our view, *illegally* revived.

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In light of the historical background noted above, it is clear that some of the fundamental premises of the current document are simply invalid. For example, the SEIS states:

"The nuclear weapons stewardship goal is to ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile. *Achieving these goals requires the continued operation of LLNL.*" (Draft SWEIS PEIS, p. S-2)

As a factual matter, the highlighted statement is simply not true. LLNL could be crippled tomorrow by a major earthquake—a not-so-incredible event, by the way — and the United States would still be left with a very robust nuclear deterrent, for the following reasons:

- LLNL-designed nuclear weapons – the W62 and W87 intercontinental ballistic missile warheads, the W84 cruise missile warhead, and the B83 bomb *currently* account for only 20% of the total US "war reserve" stockpile of nuclear weapons, and by 2009 this fraction is likely to sink further, to around 15%.
- The approximately 400 W84 warheads supported by LLNL have no delivery system – all Ground Launched Cruise Missiles (GLCMs) were eliminated under the terms of the 1987 INF Treaty – and are not maintained as part of the "active" nuclear weapons stockpile.

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- Implementation of the "operationally deployed" strategic force reductions agreed to in the 2002 Moscow Treaty on Strategic Offensive Reductions (SORT) will result in the retirement of all 600 remaining W62 warheads from the stockpile by 2009.
- Within the 10 year period covered by this document, LLNL will have only two warheads types -- the W87 and the B83, remaining in the stockpile: the W87 is finishing a major multi-year "Life Extension" program this year (FY 2004), and renovation of some 650 B83 strategic bombs is not planned within the next five years.
- NNSA is pushing advanced development of a "robust" earth penetrating variant of the B83 megaton-range bomb that a near majority in Congress (204-214 in a recent House vote) oppose. One wonders whether the pressure to pursue this project is partly to give LLNL's redundant nuclear weaponeers something to do.

In sum, over the next five years LLNL will have little bona-fide workload relating to the support of its 1200 actively deployed weapons in the U.S. nuclear stockpile, creating a clear window of opportunity to restructure and consolidate nuclear weapon stockpile support functions at Los Alamos and Sandia Albuquerque national laboratories. (Sandia has always had, and continues to have, the primary responsibility for monitoring and maintaining the performance of the deployed nuclear stockpile.) Clearly, it makes no sense to maintain a separate \$1 billion per year NNSA weapons program at LLNL to support a mere 15% of US stockpile warheads.

3/08.01, 31.01 cont.

A few years ago, recognizing that LLNL was doing little for the weapons program other than continuing to hemorrhage billions of dollars on construction of the National Ignition Facility, NNSA failed to make the rational choice -- phasing out LLNL's residual stockpile support responsibilities -- and instead decided to "redistribute" the stockpile support workload [i.e. give Livermore something to do] by transferring responsibility for the W80 cruise missile warhead, a Los Alamos design, from LANL to LLNL!

Against the background of the seismic shift that has occurred over the last 15 years in the external political environment, including the dramatic reductions in the number and types of nuclear weapons requiring continuing support by the weapons laboratories, and the lack of validated requirements for new nuclear weapons, it defies all logic, reason, and legal standards of "reasonableness" for the Department to insist, as it does in this draft SW/SPEIS, that the only alternatives for future operation of LLNL consist solely of greater, and minor lesser deviations from the current program.

Logic and reason loudly proclaim that there must be reasonable alternatives for supporting a nuclear deterrent that do not require sustaining the level of weapons laboratory operations and programs that characterized the Cold War, and there are such alternatives. Only you won't find them considered as "Reasonable Alternatives" for detailed analysis in this Draft SW/SPEIS. The two alternatives to the "Proposed Action" deemed worthy of comparative analysis -- "No Action" (i.e. continue the status quo are proceed with projects already planned and approved for construction) and "Reduced Operation" -- do not begin to represent a good faith examination of the range of reasonable alternatives, as required by law.

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3/08.01, 31.01 cont. In fact, the purported "Reduced Operations Alternative" is not really an alternative in any meaningful sense: in 50 out of some 80 categories used for environmental comparison between the three alternatives, the impacts of the "Reduced Operation Alternative" are characterized as "Same As No Action." Table S.6-1, Comparison of Environmental Impacts and Parameters Among Baseline, No Action, Proposed Action, and Reduced Operation Alternatives, p.S-29. In most of the remaining categories, the differences range from slight to negligible, as shown in Table A below.

TABLE A: A "Reasonable Range" of Alternatives for LLNL?

	"Environmental Baseline (2002)"	"No Action Alternative"	"Proposed Action"	"Reduced Operation"	Variability (%) from Baseline
Employment					
Livermore site	10,360	10,650	11,150	9,770	- 5.7 to + 7.6
Site 300	240	250	250	230	- 4.2 to + 4.2
Non-hazardous Solid Waste	4,500 mt/yr	4,600mt/yr	4,900 mt/yr	4,200 mt/yr	+ 6.7 to + 8.9
Hazardous & Radioactive Waste Shipments (no.)	88	240	310	200	+ 127 to 252
Sanitary Waste Shipments	518	534	570	492	- 5 to + 10
Number of Material shipments (radioactive, chemical, & explosives)	470	540	600	550	+15 to 28
Hazardous Waste from Routine Operations	440 metric tons/yr	390 mt/yr	510 mt/yr	300 mt/yr	- 32 to + 16
Wastewater	300,000 gal/day	310,000 gal/day	330,000 gal/day	290,000 gal/day	+ 3.3 to + 10
Annual Electricity Use	321 M kWh	446 M kWh	442 M kWh	371 M kWh	+ 15.6 to 39

Note that the level of lab employment for the "Reduced Operations" Alternative, -- 10,000 employees -- is actually higher than it was in 1989, during the last year of the Cold War!

3/08.01, 31.01 cont. In other words, these so-called "alternatives" are sham constructs, which do not begin to reflect a reasonable range of alternatives for LLNL's future role in supporting the missions of the Department of Energy. In fact, three of the Department's most important missions, Nonproliferation, Homeland Security, and Energy Research, are given short shrift in the "Statement of Purpose and Need" that is supposed to underlie the agency's Proposed Action, even though prominent, responsible, and reasonable senior expert observers, with decades of government experience, have argued that *these missions are now more important to US national security today than rebuilding or developing nuclear weapons.*

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But nowhere in this document will you find alternatives that are premised on a future concentration on these DOE missions, accompanied by a partial contraction of the nuclear weapons effort. The mere fact that NNSA itself, as a bureaucratic entity, does not prefer such alternatives, or finds them distasteful in light of its own internal goals and objectives, does not absolve DOE from the responsibility under NEPA to consider the full range of alternatives that are objectively reasonable from a technical, environmental, and economic standpoint, quite apart from the agency's own internal preferences. Indeed, such consideration constitutes the heart and soul of NEPA's ability to identify environmentally preferable alternatives for attaining the government's purpose and need for a proposed major federal action.

Moreover, vigorous pursuit of some NNSA-LLNL objectives described in the draft SW/SPEIS could actually undermine or obstruct the achievement of DOE's very important missions outside of nuclear weapons, and these tradeoffs need to be evaluated in the context of assessing reasonable alternatives for LLNL's future operations.

In 1995, the Department's own Advisory Board *Task Force on Alternative Futures for the Department of Energy National Laboratories* (the "Galvin Commission," so named after the retired chairman of Motorola, John Galvin, who chaired the Task Force) recommended a "restructuring of weapon design capabilities" among the three nuclear weapons laboratories, noting that the restructuring would affect "primarily weapons design capabilities, where the largest functional redundancy exists, and specifically Lawrence Livermore National Laboratory."

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The Galvin Commission cautiously recommended, in light of the revised U.S. nuclear posture, including planned reductions to a "a required stockpile of around 5000 weapons" by 2003, -- half its current size -- that LLNL should "transfer, as cost-efficiency allows, over the next five years [i.e. by the year 2000] its activities in nuclear materials development and production to the other design laboratory." The proposed restructuring would also have included transfer of LLNL's "direct stockpile support" [of weapons] to the other weapons laboratories."

This recommendation is no less "reasonable," in objective NEPA terms, than it was in 1995. In fact, it is more so. While nuclear forces have continued on a downward trajectory, this has been accompanied by the anomalous restoration and expansion of redundant nuclear weapons capabilities at Livermore, duplicating similar capabilities at Los Alamos, Sandia, and NTS -- in some cases resulting in weapons research and development capabilities *in triplicate*.

For example, in this draft document, NNSA proposes to modernize and significantly expand LLNL's plutonium processing, inventories, and pit fabrication operations, upgrade and expand tritium operations, and build brand new centers for High Explosives Development and "Energetic Materials Processing" at Site 300. All these capabilities already exist in some form at one or more DOE sites.

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Los Alamos National Laboratory is already well along in a \$2.5 billion modernization of its plutonium chemistry and pit fabrication facilities, and already has extensive facilities for tritium research and target loading. Both Pantex and Los Alamos already have facilities for formulating weapons high explosives. LLNL's Site 300 flash radiography facilities duplicate those available at Los Alamos and NTS.

Moreover, the Livermore site, hemmed in by suburbs, with hazardous activities densely packed within a 1.3 square mile area that is highly vulnerable to external attack, is hardly the most appropriate place in the complex for storing and processing nuclear or chemical explosive materials.

And in an age when "the network is the computer," perhaps the most egregious example of extravagant redundancy is the recent construction of dedicated nuclear weapons supercomputing centers at all three laboratories, at an average cost, by 2009, of some \$2.92 billion *per laboratory* to equip each with state-of-the-art weapons simulation capabilities.

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By pointing out the extravagant redundancies that exist and are even growing within today's gold-plated "stewardship" complex, we do not mean to suggest that Livermore should bear the full or exclusive burden of any consolidation of complex capabilities, but rather that some overall rationalization is urgently needed to reduce the environmental footprint of the complex, reduce costs, free resources for more important defense tasks and deficit reduction, and present a more reasonable face to the rest of the world.

For example, LLNL has long demonstrated, and is continuing to demonstrate, a comparative advantage over Los Alamos in weapons computing and software development. In a rationalized and restructured complex, shorn of its most egregious redundancies, it could well make sense for Livermore to be assigned the lead laboratory role in supercomputing, and to retain sufficient weapons design competence and "technology base" to continue activities in non-proliferation, nuclear materials detection, homeland security, intelligence support, and verification, *while phasing-out or transferring to other sites its weapons plutonium, uranium, tritium, high explosive operations, radiographic hydrotest, and warhead stockpile support functions. This is a reasonable alternative that is entirely omitted from the draft SWEIS/PEIS, but would result in a significant reduction in environmental risks and impacts from future operation of LLNL.*

This omission is made even more salient by the fact that on April 27, 2004, while public hearings on the draft SWEIS were being conducted in California, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations of the Committee on Government Reform was meeting in Washington to receive testimony on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL.

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On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the future of security forces and systems protecting the DOE complex. The Secretary stated that he had previously told the Congress he would conduct a review of the requirements for the weapons complex over the next 20 years that he expected would be completed "early next year (i.e. 2005)." The study will examine, *inter alia*, "the opportunities for consolidation [of sites storing nuclear weapons materials], including "whether essential work performed at Livermore could be relocated to allow us to remove the Category I and II [Special Nuclear] material stored there (emphasis added)." Spencer Abraham, Remarks at the 32<sup>nd</sup> Security Police Officer Training Competition, May 07, 2004, www.energy.gov/pressroom/speeches.

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The fact that the senior leadership of DOE is itself studying and evaluating the removal from Livermore of activities involving the storage and use of nuclear weapons materials makes it unavoidable and imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. Indeed, the DOE is now clearly obligated as a matter of law to conduct a detailed examination of this alternative in the SW/SPEIS, since the cognizant agency is itself studying this alternative, and an agency is obligated to evaluate in an EIS reasonable alternatives having lesser as well as greater environmental impacts.

It is utterly impermissible to dismiss detailed analysis of such a lesser-impact alternative on the grounds that its impacts are subsumed in some larger, worst-case bounding analysis. The reduced risks and impacts and environmental benefits of this and other alternatives, representing the full range of reasonable alternatives, must be separately characterized and quantified, to enable fully-informed comparisons between alternatives by non-specialist policymakers and citizens. The current draft document utterly fails to meet this standard.

4/26.02

**III. By failing to prepare a timely and adequate Supplemental PEIS analyzing the Proposed Use of Hazardous Materials in NIF Experiments, the Department is in violation of Paragraph 6 of the Memorandum Opinion and Order dismissing *NRDC v. Pena*, Civ. No. 97-936 (SS) (D.D.C).**

Paragraph 6 of the above named *Memorandum Opinion and Order* required DOE, "not later than January 1, 2004:" to (1) determine whether any or all experiments using plutonium, other fissile materials, fissionable materials other than depleted uranium, lithium hydride, or a Neutron Multiplying Assembly shall be conducted in the NIF; or (2) prepare a supplemental SSM PEIS "in accordance with DOE National Environmental Policy Act (NEPA) regulation 10 CFR §1020.314 analyzing the reasonably foreseeable environmental impact of such experiments." The Court further provided, "If DOE undertakes the action described in subpart (2) of this paragraph, DOE shall complete and issue the Supplemental SSM PEIS and the Record of Decision based thereon within eighteen (18) months after issuing a notice of intent to prepare the Supplemental SSM PEIS.

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We note that the Department is now in violation of this Order in at least three respects:

- Compliance with Paragraph (1) required either a decision to reject these experiments or a ROD to conduct them "not later than January 1, 2004." DOE is in obvious violation of this requirement, and will likely remain so more several more months, if not longer.
- In the event that the Department formulated a proposal to pursue any or all of these experiments, Paragraph (2) required a finalized Supplemental SSM PEIS and a Record of Decision "within 18 months" of issuing a Notice of Intent to prepare the document. The Department is already six months late, and may ultimately be many more months late, in complying with this requirement, depending on the final outcome of the LLNL-SWEIS.
- And Paragraph (2) required both a Notice of Intent to prepare a Supplemental *Stockpile Stewardship and Management* PEIS and the timely completion and issuance of such a document. The Department to our knowledge never issued a definitive Notice of Intent to Prepare a Supplemental SSM PEIS regarding these experiments, and instead issued a kind of conditional NOI as part of a June 17, 2002 Federal Register NOI to prepare the Livermore SWEIS. In the event, the Department did not prepare a separate Supplemental SSM *Programmatic* Environmental Impact Statement, as the Court directed, but merely a tardy appendix to an ongoing SWEIS, a step that was neither envisioned nor sanctioned by the Court's order.

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One obvious effect of the Department's noncompliance has been the preparation of a draft that *does not discuss any reasonable programmatic alternatives for satisfying the NNSA's purpose and need in proposing NIF experiments with such hazardous materials*. This omission is doubly egregious as this very issue was the subject of extensive prior litigation, resulting in the aforementioned court order.

From the stakeholder's perspective, it appears that DOE first denied the existence of proposals circulating within Defense Programs (now NNSA) and its weapons laboratories advocating the conduct of such experiments, with the clear intent of precluding discussion of such experiments in the December 1996 Stockpile Stewardship and Management PEIS. Despite copious documentation of plans and proposals to conduct such experiments presented to the Court, DOE continued publicly to disavow any such intention, with the obvious intent of avoiding the negative publicity that would attend a forthright and candid discussion of its real plans.

For example, as late as January 15, 2002, the Department stated in a Federal Register Notice (67 FR 1969) "...at the present time there are no DOE proposals to use any of these materials in experiments in the NIF." Six months later, in the June 17, 2002 Notice of Intent to prepare the Livermore Site-Wide EIS, the Department's position had evolved: it now had in place "a process to determine whether or not to propose the use of any of these materials in NIF experiments...If DOE were to decide to propose the use of any of these materials in the NIF, a NEPA analysis and determination would be undertaken as a project specific analysis to be included in the SWEIS." Fed. Reg., Vol.67, No.116/June 17, 2002 at 41226

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A "NEPA analysis"? A "project specific analysis to be included in the SWEIS"? The District August 1998 Court's order clearly required notice and preparation of a "Supplemental Programmatic Environmental Impact Statement."

The Department's (or perhaps NNSA's) utter bad faith on this question is revealed by the fact that as early as April 6, 2001, in a Memorandum sent to Congress certifying the viability of a "rebaselined" NIF Project following a \$1.3 billion cost overrun. Brig. General Thomas F Gioconda, the Acting Administrator for Defense Programs unequivocally stated (at p. 7):

NIF is being built to achieve the goal of demonstrating inertial confinement fusion (ignition) in the laboratory. Specific regimes and capabilities *required* include: high temperature opacity of *weapons materials*; high pressure equations of state for *weapons materials*; x-ray radiation sources for *weapons effects*; complex, compressible hydrodynamics and *mixing* [this phrase typically refers to the interface between plutonium and deuterium-tritium gas in the first stage of a nuclear explosion] and thermonuclear ignition (emphasis added).

Compare the previous statement with the now official statement, *three years later*, of "Purpose and Need for the Use of Proposed Materials in the National Ignition Facility" contained in the draft SWEIS (Appendix M at p.8-10). The similarity is unmistakable.

There is a need to perform experiments on the NIF with plutonium or enriched uranium without ignition. These experiments are generally designed to study the *equation of state of these [weapon] materials*.

Experiments will be conducted on NIF to examine the growth and control of hydrodynamic instabilities, which are important both in making inertial confinement fusion targets ignite and burn, and in making nuclear weapons perform reliably. Hydrodynamic instabilities ultimately lead to *mixing of some quantity of one [weapon] material with another*.

There is a need to perform experiments on the NIF with lithium hydride... These are *materials physics and equation of state experiments* designed to address fundamental physical behavior [e.g. opacity, a measure of resistance to radiation flow at different temperatures] of this material and to allow benchmarking of physical models of this material.

The record, unfortunately, reveals that the Department's failure to comply with the District Court's order has been willful and deliberate, the product of its strategy to deny to the public, for as long as possible, a correct appreciation of DOE's longstanding plans to use nuclear weapon materials in the NIF as a pathway to enhancing nuclear weapons research and development in the absence of underground testing. This entire issue should have been analyzed and discussed in the original 1996 PEIS, or failing that, in a timely Supplemental PEIS as directed by the Court.

We will be contacting the Department in the near future to discuss possible remedies for the Department's evasion of its NEPA obligations and its ongoing violations of the District Court's 1998 Order.

4/26.02  
cont.

Natural Resources Defense Council, Christopher Paine, Senior Nuclear Program Analyst  
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15

2/01.01, 27.01, 27.02, 27.03, 31.05  
cont.

4/26.02  
cont.

3/08.01, 31.01  
cont.

In the meantime, in the context of these comments on the draft SWEIS, we urge that the following steps be undertaken immediately:

(1) Suspend work on the LLNL "Advanced Material Program" until such time as a proper Supplemental PEIS can be prepared, circulated for public comment, revised and issued in final form, and incorporated in a formal Record of Decision (ROD) on whether or not to proceed with the restart of DOE's Plutonium AVLIS program at LLNL. The obvious "segmentation" that characterizes DOE's current NEPA evasion strategy is simply unacceptable.

(2) Prepare a proper Supplemental PEIS on the use of fissile and other hazardous materials in the NIF, as required by the District Court Order, analyzing a range of reasonable programmatic alternatives to such use, and their reasonably foreseeable consequences, including impacts on nuclear weapons proliferation if fissile material use is allowed to become a routine part of global ICF research.

(3) Suspend the process of revising and finalizing the current grossly inadequate draft LLNL SWEIS, and: prepare a new representative set of reasonable future operation alternatives that clear the threshold for acceptable NEPA analysis, including fissile material consolidation alternatives now under study elsewhere in the Department, and contamination risk scenarios that reflect post 9/11 threat levels; revise the current draft SWEIS accordingly to incorporate detailed analysis of these alternatives, and relevant data developed in the Pu-AVLIS and NIF Supplemental PEIS documents; and circulate the revised draft for public review and comment.

By separate communication, NRDC is submitting detailed technical comments regarding the inadequate SWEIS analysis of the risk of radioactive contamination from a plutonium fire and breach of containment in the LLNL Superblock.

We look forward to amicably and expeditiously resolving these matters with the Department at the earliest opportunity, preferably without resorting to litigation, and urge that serious and prompt consideration be given to these comments.

I further suggest that you immediately forward a copy of these comments to Dr. Everett Beckner, NNSA Deputy Administrator for Defense Programs. I do not have his email address or fax readily at hand, and the comment filing deadline looms. If he would like to discuss this matter, I can be reached at 434-244-5013 or at [chrispaine@earthlink.net](mailto:chrispaine@earthlink.net).

Sincerely,

Christopher E. Paine  
Senior Nuclear Program Analyst  
Natural Resources Defense Council

**Natural Resources Defense Council, Matthew McKinzie, Ph.D.,  
Staff Scientist  
Page 1 of 6**

NRDC Comments

-----Original Message-----  
 From: McKinzie, Matthew [mailto:mmckinzie@nrdc.org]  
 Sent: Friday, May 28, 2004 7:11 AM  
 To: tom.grim@oak.doe.gov  
 Subject:

Dear Mr. Grim,

Please find attached a portion of NRDC's formal written comments on the Draft LLNL SW/SPEIS--the additional comments regarding the plutonium hazard analysis which Chris Paine mentioned in his e-mail last night.

Unfortunately I was unable to send these comments until this morning. I hope that does not cause any difficulties. If you have any questions please call me at 202-299-4393 today or next week.

Thank you,  
 Matthew McKinzie

LLNL\_SWEIS\_Comments\_MMckinzie.doc

**Natural Resources Defense Council, Matthew McKinzie, Ph.D.,  
Staff Scientist  
Page 2 of 6**

Matthew McKinzie, Ph.D.  
 Staff Scientist, Nuclear Program  
 Natural Resources Defense Council  
 1200 New York Avenue, N.W., Suite 400  
 Washington, DC 20005

May 27, 2004

Mr. Thomas Grim, L-293  
 U.S. Department of Energy,  
 National Nuclear Security Administration  
 Livermore Site Office, SWEIS Document Manager  
 7000 East Avenue  
 Livermore, CA 94550-9234

Fax: (925) 422-1776  
 Email: tom.grim@oak.doe.gov

Dear Mr. Grim:

I submit the following comments on the DOE/NNSA's Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (Draft SW/SPEIS) on behalf of the Natural Resources Defense Council.

1/30.01 My comments focus on the deficiency of the publicly circulated Draft SW/SPEIS regarding a comparative analysis of the consequences of terrorist attack scenarios among the alternatives presented for the continued operation of LLNL. In my judgment this substantial denial of information to the public necessitates further work by the DOE/NNSA and re-circulation of the document in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments.

2/31.04

As part of the Proposed Action, the DOE/NNSA is considering using plutonium on the National Ignition Facility (NIF), increasing the administrative limit for the use of plutonium on the Superblock and increasing the material-at-risk limit for the Plutonium Facility in the Superblock. The new administrative limit proposed for fuel-grade plutonium in the Draft SW/SPEIS is 1,500 kilograms (kg).

3/27.01 The DOE/NNSA Proposed Action includes the Integrated Technology Project (ITP), requiring LLNL to:

...increase the plutonium material-at-risk limit from 20 to 60 kilograms of fuel-grade equivalent plutonium in each of two rooms of the Plutonium Facility. This

Natural Resources Defense Council, Matthew McKinzie, Ph.D.,  
Staff Scientist  
Page 3 of 6

3/27.01 | increase is needed to meet future Stockpile Stewardship Programs such as ITP  
cont. | and the casting of plutonium parts. [S-16]

The LLNL Draft SW/SPEIS made available to the public omits a comparative analysis of the consequences of terrorist attack scenarios under the No Action, Proposed Action and Reduced Operation alternatives. In the document's summary section, it is stated that all terrorist attack scenario analyses have been classified or otherwise restricted from the public, but it is furthermore implied that the consequences of *any* terrorist attack scenarios would be less severe than the accident scenarios analyzed in the Draft SW/SPEIS:

The Superblock plutonium inventory is stored in robust vaults and no accident scenario involving the material in the vaults is considered reasonably foreseeable. Terrorist acts and Superblock security are considered in the LLNL SW/SPEIS. The information on these accidents is provided in classified or official use only documents. The accidents discussed in the LLNL SW/SPEIS bound the environmental impacts associated with the proposed higher plutonium inventory limit. [S-15]

4/30.01,  
33.01

In the aftermath of the September 11<sup>th</sup> terrorist attacks, it is common knowledge that government agencies at the local, state and federal levels are engaged in planning and training for emergency responses to terrorist incidents involving chemical, biological and radiological materials or weapons. The Department of Homeland Security now urges individuals to prepare to shelter at their homes or devise a family evacuation plan in the event of such an attack. It is not credible, reasonable or responsible for LLNL to restrict all information from the public pertaining to the risks and consequences of terrorist attacks against the laboratory—particularly attacks targeting its plutonium inventory. The location of LLNL close to residential areas places a further burden on the laboratory to discuss the potential impacts of terrorist attacks against the laboratory on nearby populations.

In addition, NEPA places a legal burden on the DOE/NNSA to contrast the terrorist attack scenario consequences under the No Action, Proposed Action and Reduced Operation alternatives, provide such information to the public during comment periods and use this information in the government decision-making process.

That the February 2004 LLNL Draft SW/SPEIS is deficient in this regard can be illustrated by considering a basic terrorist attack scenario: a truck loaded with two tons of high explosives crashes through the security checkpoint at the Mesquite Way entrance, travels at a high rate of speed less than a kilometer west on Third Street, crashes through the Superblock perimeter fence and detonates near an experimental area where LLNL staff are working with the maximum permitted material-at-risk quantity of plutonium. A comparative analysis of the alternatives for continued operation of LLNL would contrast the consequences from 20 kg versus 60 kg of plutonium subject to blast and fire from such an explosion. Furthermore, it is straightforward to show that the consequences

Natural Resources Defense Council, Matthew McKinzie, Ph.D.,  
Staff Scientist  
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4/30.01 | could reasonably be modeled as much more significant than the accident scenario  
33.01 | consequences discussed in the LLNL Draft SW/SPEIS.

cont. | In the wake of the September 11th terrorist attacks there has been an increased use within the U.S. Government of computer models designed to calculate the dispersal of chemical, biological or radiological agents. One computer model that currently has widespread use in the U.S. military and emergency first-responder communities is HPAC, which stands for Hazard Prediction and Assessment Capability. HPAC was developed to accurately predict the effects of hazardous material releases into the atmosphere and calculate the corresponding impacts on civilian and military populations. The HPAC software is distributed by the Defense Threat Reduction Agency (DTRA), an agency of the U.S. Department of Defense. The NRDC is a licensed user of HPAC.

HPAC can be used to model the dispersal of radiological material through its "Radiological Weapon Incident Model." Within this model, the user has the option to enter a source term for "No/Partial Yield Nuclear Weapon and Explosives Dispersal of Radioactivity." In the calculation of this source term, the HPAC user inputs the TNT equivalent of the high explosive yield, the mass of plutonium involved in the incident and the respirable plutonium particle fraction. This type of calculation would neglect any mitigating effects of the physical structure of the Superblock or the additional dispersal of plutonium to the environment due to secondary fires after the explosion. The HPAC model illustrates how widely plutonium could be dispersed and the impacts to nearby residential population centers when the plutonium is in proximity to an explosion. Nevertheless, these calculations show a substantial difference in consequences between the alternatives put forward in the Draft SW/SPEIS and imply a much larger impact than the accident scenarios discussed in the publicly circulated Draft SW/SPEIS.

5/25.05

The LLNL is located at 37° 41' North and 121° 42' West in Alameda County approximately 40 miles east of San Francisco. According to the 2000 U.S. census data analyzed by census blocks in the vicinity of the Lab, approximately 2,100 people live within one mile of LLNL, 69,000 people within 5 miles, 123,000 people within 10 miles and 7.2 million people live within 50 miles of the Lab. Just how far plutonium would be dispersed in a hypothetical incident at LLNL would depend on the severity of damage to the Superblock, the quantity of plutonium involved in the incident and the speed and direction of the prevailing winds.

For this public comment we look at a worst-case scenario where the wind is blowing from the east towards Livermore, Oakland and San Francisco. According to the Draft SW/SPEIS, such winds are observed during the wet season (November through May) five percent of the time at speeds from 0.5 to 3 meters per second (mps) [4.7-4].

HPAC calculations of the consequences of terrorist incidents involving 20 kg and 60 kg of plutonium are shown below. The plume of plutonium is calculated to extend westward to San Francisco, contaminating a very large area and placing thousands of individuals at risk for radiation sickness and cancers. These calculations further show that the 60 kg scenario is much worse than the 20 kg scenario: a significant difference between the

Natural Resources Defense Council, Matthew McKinzie, Ph.D.,  
 Staff Scientist  
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5/25.05 | proposed alternatives for continued operation of LLNL that must be included in the  
 cont. | publicly circulated Draft SW/SPEIS and serve as a factor in government decision-making.

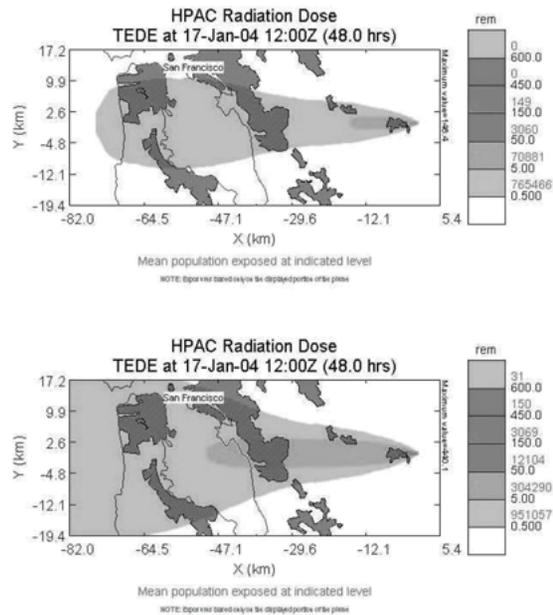


Figure: HPAC calculations of the dispersal of 20 kg of plutonium (above) and 60 kg of plutonium (below) after a terrorist attack involving two tons of high explosives. Winds were fixed at 1.5 mps blowing from the east. Dose contours are for unsheltered individuals exposed to the plume for 48 hours after the explosion.

Natural Resources Defense Council, Matthew McKinzie, Ph.D.,  
 Staff Scientist  
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5/25.05 | The calculations shown here are illustrative of the data that needs to be included in the  
 cont. | publicly circulated Draft SW/SPEIS to satisfy the requirements of NEPA, particularly in  
 6/30.01, | the current security environment. The alternatives analysis of the Draft SW/SPEIS should  
 08.02, | be revised to consider such terrorist attack scenarios, as well as the compelling case for  
 31.04 | removing special nuclear materials (i.e., plutonium and highly enriched uranium) from  
 the LLNL site.

Sincerely,

Matthew McKinzie, Ph.D.  
 Staff Scientist, Natural Resources Defense Council

Nevada Desert Experience, Amy F. Schultz, Outreach Coordinator  
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## Nevada Desert Experience

Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

**Board of Directors**

John Dear, at  
Springer, NM

Bishop Thomas Gambleton,  
Detroit, MI

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NEWESOGOMIA

**Staff**

Paul Colbert  
Office Manager  
Las Vegas, NV

Amy Schultz  
Youth/Young Adult  
Outreach Coordinator  
Oakland, CA

Dear Mr. Grim,

I write on behalf of the *Nevada Desert Experience*, a faith-based organization that has been working for peace and the abolition of nuclear weapons for over 20 years. I recently attended the SWEIS public hearing in Livermore on April 27, 2004. As you remember, there was a very large crowd of people there, almost all of them there to express their dissatisfaction and concerns over the DOE's future plans for the LLNL. Although I did not have a chance to speak because of the time restrictions, my sentiments and beliefs were echoed through the voices of the various people present at that public hearing, as well as the other hearings.

It is now the end of the public comment period, and I have no doubt that you have received hundreds of postcards, phone calls, emails and letters expressing opposition of the plans at Livermore. As you well know, the 10 year plan will have serious health and environmental consequences. I live in the Bay Area, only 40 miles from Livermore. I know that I live within the area that will be contaminated, should an accident or leak occur at the labs. What about the children living down the street from the labs, playing in their schoolyard - or the lab worker who unknowingly inhales a toxic substance and later becomes ill? I ask you to please remember these people when you continue to consider your future plans for the weapons labs.

In addition, I write specifically for point number 8, which calls for "enhanced readiness" at the Nevada Test Site. My employer organization works for the end to testing and other war making preparations at the NTS. We know that the effects of testing nuclear weapons and their components is hazardous and often deadly. The air and land surrounding the test site are contaminated. Additionally, the land rightfully belongs the Western Shoshone Nation, yet the US government continues to deny the rights of the indigenous people of the land. Instead, they have illegally seized the land, and used to create and test weapons of mass destruction.

1/23.01

2/07.02,  
39.01

Nevada Desert Experience, Amy F. Schultz, Outreach Coordinator  
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3/32.02 But by far, the worst effect of the DOE plans are the **hundreds and thousands of lives that will be lost when we decide to use the weapons of mass destruction.** True security for our nation and for the world will come only through peace and communication, not through a build up of our weapons and the use of them! I implore you to consider the lives that will be lost because our nation finds it necessary to have a policy of empire. **I oppose the current plans of the DOE for the future of the Lawrence Livermore National Laboratories.**

4/04.01

5/31.04 Through this letter we, the members of the Nevada Desert Experience, are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

6/08.02

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.
2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.
3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium

7/34.01

8/33.01,  
25.01

Nevada Desert Experience, Amy F. Schultz, Outreach Coordinator  
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7/34.01  
8/33.01,  
25.01  
cont.  
9/27.01  
10/37.01  
11/26.01  
12/26.03  
13/26.04  
14/39.01  
15/35.01

and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.

7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.

8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.

9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore

Nevada Desert Experience, Amy F. Schultz, Outreach Coordinator  
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15/35.01  
cont.  
16/14.01  
17/20.05,  
22.01  
18/01.01  
19/07.01

Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.

10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.

11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.

12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.

13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).

Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.

The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.

Sincerely,  
*Amy F. Schultz*  
Amy F. Schultz  
Nevada Desert Experience  
Outreach Coordinator  
POB 7849, Oakland, CA 94609

**Nielsen, David**  
**Page 1 of 1**

**Nordlund, James M.**  
**Page 1 of 3**

David Nielsen  
 13101 Sunmor Avenue  
 Mountain View, CA 94040

May 18, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

Please,

1/02.01 Do not create another generation of nuclear weapons.

Thank you !

David Nielsen

Sincerely,

David Nielsen

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

**From:** james m nordlund [mailto:realitee1@yahoo.com]

**Sent:** Friday, May 07, 2004 9:03 PM

**To:** tom.grim@oak.doe.gov

**Subject:** Comments on: plutonium and tritium programs at the U.S. D.O.E.'s LLNL.

Mr. Tom Grim  
 DOE, NNSA, L-293  
 7000 East Avenue  
 Livermore, CA 94550

Dear Mr. Grim,

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01 I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab. Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

**Nordlund, James M.**  
**Page 2 of 3**

4/26.01, 26.03	<p>3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.</p>
5/37.01	<p>4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.</p>
6/39.01	<p>5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.</p>
7/35.01	<p>6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.</p>

**Nordlund, James M.**  
**Page 3 of 3**

8/04.01	<p>I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.</p>
9/07.01	<p>Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.</p>
	<p>Truly,                   James M Nordlund                  813 N. 5 St., #3, Stockton, KS                  67669-1561, U.S., phone :) 785-425-5042</p>

**Nuclear Age Peace Foundation, David Krieger, President, and Justine Wang, Research and Advocacy Coordinator**  
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**Nuclear Age Peace Foundation, David Krieger, President, and Justine Wang, Research and Advocacy Coordinator**  
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-----Original Message-----  
**From:** Justine Wang [mailto:advocacy@napf.org]  
**Sent:** Thursday, May 20, 2004 2:59 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:** Important comments on the SWEIS at LLNL



Dear Mr. Grim,

**RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).**

The Nuclear Age Peace Foundation is an organization of over 10,000 members, many of which are based in California. Through this letter we are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

1/31.04

2/08.02

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2/08.02 cont.

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5/27.01

6/37.01

2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

**Nuclear Age Peace Foundation, David Krieger, President, and Justine Wang, Research and Advocacy Coordinator**  
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7/26.01  
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11/35.01  
12/14.01

6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.

7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on the DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.

8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.

9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.

10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.

**Nuclear Age Peace Foundation, David Krieger, President, and Justine Wang, Research and Advocacy Coordinator**  
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11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.

12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.

13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).

Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.

The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.

Sincerely,

David Krieger  
President

cc: Senator Barbara Boxer  
Senator Dianne Feinstein

Justine Wang  
Research and Advocacy Coordinator  
Nuclear Age Peace Foundation  
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**Nuclear Control Institute, Paul Leventhal, President**  
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**NUCLEAR CONTROL INSTITUTE**  
1000 UNIVERSITY AVENUE SUITE 204 WASHINGTON DC 20004

LETTER ALSO SENT TO SENATOR EXON, REPRESENTATIVES ASHBY AND BRADY  
 May 26, 1989

The Honorable Sam Nunn  
 Chairman, Senate Armed Services Committee  
 222 Russell Office Building  
 Washington, DC 20510

Dear Senator Nunn:

We are writing to express our concern that the proposed construction and operation by the Department of Energy (DOE) of the Special Isotope Separation (SIS) plant in Idaho will undermine the United States' nuclear non-proliferation objectives. The SIS plant would produce plutonium of weapons-grade purity from plutonium that is not ideally suited for weapon-design purposes. Operation of the SIS plant would set a precedent for the use of such plutonium purification technology in the nuclear programs of other nations, including non-nuclear weapons states. In addition, there are disturbing indications that in the United States the SIS plant eventually might be used to purify plutonium obtained from commercial power reactor spent fuel into weapons-grade plutonium. For both these reasons, going forward with the SIS plant could severely compromise U.S. non-proliferation objectives.

Potential Military Use of Civilian Nuclear Fuel

The SIS plant originally was proposed to produce weapons-grade plutonium from plutonium in commercial spent fuel, a practice that would violate a basic tenet of U.S. non-proliferation policy--the separation of civilian from military applications of nuclear energy. In response, Congress passed the Hart-Simpson-Mitchell amendment to the Atomic Energy Act in 1982, prohibiting the military use of commercial plutonium or enriched uranium. Presently, only a Congressional declaration of national emergency under Section 108 of the Atomic Energy Act could waive this ban on military use of commercial plutonium.

Although the SIS facility has a 30-year design life, it is estimated that the processing into weapons-grade plutonium of the 8-9 metric tons (MT) of fuel-grade plutonium available to the DOE from its own program will take less than ten years. To date, the DOE has not assigned an additional role for SIS after this initial ten-year period.

Do not print this document for general distribution without the approval of the Nuclear Control Institute.

Paul D. Leventhal, President; Peter B. Bradford, Deputy Director; Bruce Manning, Thomas D. Hoover, LSW (Staff), Dennis A. Moore, Julian Korman, Steven David Leventhal, Nancy R. (Staff); 1000 University Ave. Washington, DC 20004

1/27.01

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**STATEMENT BY PAUL LEVENTHAL**  
**Founding President**  
**Nuclear Control Institute**  
**On the Nuclear-Proliferation and Terrorism Risks of the**  
**Proposed Plutonium Isotope Separation (AVLIS) Plant**

**U.S. Department of Energy Hearing**  
**Washington D.C.**  
**April 30, 2004**

The Nuclear Control Institute strongly opposes on nuclear non-proliferation grounds the Department of Energy's plan to revive the long-dormant plutonium AVLIS (Atomic Vapor Laser Isotope Separation) Plant at Lawrence Livermore National Laboratory. In 1990, the Reagan Administration decided to zero out funding for construction of the predecessor Special Isotope Separation (SIS) plant--a facility capable of purifying plutonium obtained from nuclear power plants into material ideally suited for nuclear weapons.

The decision to halt work on the SIS plant at DOE's Idaho Falls site represented a major victory for nuclear non-proliferation at the time. A key factor in the decision to cancel the plant was a report on the nuclear weapons production complex by the U.S. National Research Council that stressed the considerable proliferation risks posed by plutonium isotope separation technology. The report warned that "technology for converting reactor-grade to weapons-grade plutonium...forms a potential bridge between the civilian fuel cycle and weapons production." It concluded: "Any decision to proceed with the SIS facility should explicitly consider the implications of the technology for nuclear proliferation."

This report, which was released in December 1989, mirrored the non-proliferation arguments made in a letter signed by 31 experts on nuclear weapons and nuclear non-proliferation and released the previous May by the Nuclear Control Institute. The letter, sent by NCI to the chairmen and members of the House and Senate Armed Services committees, explained in detail the threat posed by the SIS technology to the vital separation of civil and military uses of nuclear energy and the dangerous precedent that construction of the plant would set for non-nuclear weapons states. Those arguments were influential in Congress' decision to delete most of the funding from the SIS project and the Reagan Administration's eventual decision to kill it--and those arguments are equally applicable today.

"Proceeding with the plant," the signers of the letter warned, "would do serious damage to the United States' long-standing national-security objective of discouraging and inhibiting further nations or terrorists from acquiring nuclear weapons." Among the signers were Gerard Smith, former chief SALT I negotiator and former ambassador-at-large for nuclear non-proliferation; Paul Warnke, the first director of the U.S. Arms Control and Disarmament Agency; Peter Bradford, former commissioner of

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the Nuclear Regulatory Commission; Russell Peterson, former director of the Congressional Office of Technology Assessment, Freeman Dyson of the Princeton Institute for Advanced Study, as well as several other academic and independent experts on nuclear weapons matters. (See attached letter.)

The experts asserted that construction and operation of the SIS plant would threaten U.S. non-proliferation objectives without providing offsetting national-security benefits. They cited four specific concerns:

• First, DOE had told Congress that commercial power reactor spent fuel is a "potential" plutonium source for the SIS plant; "a practice that would violate a basic tenet of U.S. non-proliferation policy the separation of civilian from military applications of nuclear energy."

• Second, completion of the SIS plant could lead to the "spread of SIS-type laser technologies world-wide and would pose "unprecedented challenges to containing the nuclear programs of emerging and advanced industrial nations to exclusively peaceful purposes."

• Third, future operation of SIS-type facilities in non-nuclear weapons states would present a formidable safeguards task for the International Atomic Energy Agency (IAEA). Processing and storage of unprecedented quantities of a number of plutonium isotopes would require development of a new safeguards regime for which the IAEA "has no previous experience and is ill-equipped."

• Finally, the plutonium purification processes carried out in an SIS plant could inadvertently "completely thwart" an important technical means to verify future arms reduction agreements, thereby having "an unintentional, adverse effect on the verification of arms control agreements between the United States and the Soviet Union."

The experts concluded: "In view of the acknowledged surplus of plutonium in the U.S. nuclear arsenal, there are no clear national-security benefits that offset the obvious nuclear proliferation and terrorism risks, as well as safeguards and verification problems, posed by the planned construction and use of the SIS plant."

It is by no means clear that there are national-security benefits today that would justify DOE's planned revival of the plutonium laser isotope separation plant at Livermore. The Site-Wide Environmental Impact State for Lawrence Livermore National Laboratory speaks only of "a need for augmentation of the current inventory of special nuclear material (e.g. plutonium, enriched uranium) to support the Stockpile Stewardship certification activities." The type of plutonium needed is not specified, but it is widely assumed that Pu-242 is needed for hydrodynamic testing of a mock-up nuclear weapon during which the high explosives are detonated and the resulting motions and reactions of materials and components are measured.

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But there is no analysis of why this isotope of plutonium could not be produced by simply irradiating target material in an operating reactor within the DOE complex as had been done in the production reactors at the Savannah River Site before they were shut down. Equally troubling is the absence of any discussion in the EIS of what mission the plutonium isotope separation plant, with a 30-year design life, would be given after any campaign to separate Pu-242 is completed.

The predecessor SIS plant was supposed to process 8-9 metric tons of DOE fuel-grade plutonium into weapons-grade plutonium over less than 10 years, and it had not been assigned an additional role after that work was completed. This was a matter of considerable concern at the time because DOE's Acting Assistant Secretary for Defense had testified before the House Armed Services Committee that commercial spent fuel "is a potential" plutonium source for the SIS facility, although not part of present planning for the facility because a "major change in law" would be required.

The law he was referring to is the Hart-Simpson-Mitchell amendment to the Atomic Energy Act in 1982, prohibiting the military use of commercial plutonium or enriched uranium. It was enacted directly in response to DOE's original mission for the SIS plant to produce weapons-grade plutonium from plutonium in commercial spent fuel, a practice that would have violated a basic tenet of U.S. non-proliferation policy --the separation of civilian from military applications of nuclear energy. Under the statute, only a Congressional declaration of national emergency under Section 108 of the Atomic Energy Act could waive this ban on military use of commercial plutonium.

Given this troubling history, it is as important to get assurances of what the plutonium isotope separation plant will not be used for as it is to get details of what the plant would be used for. Unless potential use of the plant as a bridge between military and civilian applications of nuclear energy is specifically ruled out, there is a strong likelihood that DOE will find a way to bridge the gap.

The Bush-Cheney energy plan, released in May 2000, makes clear that this Administration is favorably disposed toward the reprocessing of commercial nuclear power plant spent fuel. The energy plan cites the reprocessing experience of Britain, France and Japan as an example for the United States to follow. There are high costs, severe security risks, unresolved waste disposal problems and mounting stockpiles of unwanted plutonium associated with these programs. Yet, the nuclear industry and its allies on Capitol Hill have been pushing the Bush Administration to reverse the decisions against reprocessing made in the Ford, Carter and Reagan Administrations and to follow the Europeans and Japanese instead.

A major defect of the site-wide Livermore EIS is that there is no non-proliferation analysis of the impact of the plutonium AVLIS program. NCI's position is that proliferation implications of the AVLIS plant must be included in the SWEIS and thoroughly analyzed before any decision on proceeding with the plant is made. A non-proliferation impact analysis should be prepared and made an integral part of the EIS and subject to review under the terms of the National Environmental Protection Act (NEPA).

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The review should include a thorough analysis of the impacts of laser-separation technology which, if developed and applied at Livermore, could be disseminated or otherwise stimulate development of such plants in non-nuclear weapon states under civilian auspices for production of weapons-grade plutonium.

An example of past dissemination by DOE of military nuclear technology was the transfer to Japan in the 1980s by Oak Ridge National Laboratory of breeder-blanket reprocessing technology for the separation of weapons-grade plutonium. The Oak Ridge blueprints were used for the design of Japan's Recycle Equipment Test Facility (RETF). This was deemed by DOE not to be a transfer of "sensitive nuclear technology" prohibited from export to a non-nuclear weapons state on the grounds Japan already had a civilian reprocessing program, albeit one applied to spent fuel, not breeder blanket material. The same logic could apply to future transfer of plutonium AVLIS technology to Japan on grounds that Japan already has a laser program albeit for fusion-development not plutonium-refinement purposes.

The proliferation significance of AVLIS technology has been made all the more apparent by Iran's admission last fall to the IAEA that it had been secretly pursuing a laser-based uranium-enrichment program since 1991. Previously, Iran had acknowledged to the IAEA a research and development program involving lasers, but not an enrichment program. Given the urgency of U.S. efforts to win wide international support for shutting down Iran's nuclear weapons program, this is surely precisely the wrong time to start up a nuclear-weapons AVLIS program at Livermore National Laboratory.

In conclusion, DOE would be well advised to apply to the plutonium AVLIS facility the advice offered by the U.S. National Research Council in 1989 with regard to the SIS plant: "Any decision to proceed...should explicitly consider the implications of the technology for nuclear proliferation."

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**NUCLEAR CONTROL  
 INSTITUTE**

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LETTER ALSO SENT TO SENATOR EXON, REPRESENTATIVES ASPIN AND SPRATT

May 26, 1989

The Honorable Sam Nunn  
 Chairman, Senate Armed Services Committee  
 222 Russell Office Building  
 Washington, DC 20510

Dear Senator Nunn:

We are writing to express our concern that the proposed construction and operation by the Department of Energy (DOE) of the Special Isotope Separation (SIS) plant in Idaho will undermine the United States' nuclear non-proliferation objectives. The SIS plant would produce plutonium of weapons-grade purity from plutonium that is not ideally suited for weapon-design purposes. Operation of the SIS plant would set a precedent for the use of such plutonium purification technology in the nuclear programs of other nations, including non-nuclear weapons states. In addition, there are disturbing indications that in the United States the SIS plant eventually might be used to purify plutonium obtained from commercial power reactor spent fuel into weapons-grade plutonium. For both these reasons, going forward with the SIS plant could severely compromise U.S. non-proliferation objectives.

Potential Military Use of Civilian Nuclear Fuel

The SIS plant originally was proposed to produce weapons-grade plutonium from plutonium in commercial spent fuel, a practice that would violate a basic tenet of U.S. non-proliferation policy--the separation of civilian from military applications of nuclear energy. In response, Congress passed the Hart-Simpson-Mitchell amendment to the Atomic Energy Act in 1982, prohibiting the military use of commercial plutonium or enriched uranium. Presently, only a Congressional declaration of national emergency under Section 108 of the Atomic Energy Act could waive this ban on military use of commercial plutonium.

Although the SIS facility has a 30-year design life, it is estimated that the processing into weapons-grade plutonium of the 8-9 metric tons (MT) of fuel-grade plutonium available to the DOE from its own program will take less than ten years. To date, the DOE has not assigned an additional role for SIS after this initial ten-year period.

*Strategies for stopping the spread and reversing the growth of nuclear arms.*

Paul L. Leventhal, President; Peter A. Bradford, David Cohen, Rear Admiral Thomas D. Davies, ESP (Ret), Dean A. Hayes, Julian Koenig, Sharon Decker Leventhal, Roger Richter, Dr. Theodore E. Dyke  
 www.nuclearcontrol.org

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However, the FY 1989 DOE Congressional Budget Request describes the SIS plant as allowing for "sprint/surge" capacity. Another source of fuel-grade plutonium will be necessary to achieve this "sprint/surge" capacity after the DOE's supply of plutonium is exhausted within ten years of start-up. As recently as March, 1989, DOE Acting Assistant Secretary for Defense Programs, Troy Wade, testified before the House Armed Services Committee that commercial spent fuel "is a potential" as a plutonium source for the SIS facility, although not part of present planning for the facility because a "major change in law" would be required.

Proliferation of SIS Technologies

The new technologies incorporated into the SIS plant pose unprecedented challenges to containing the nuclear programs of emerging and advanced industrial nations to exclusively peaceful purposes.

The production-scale demonstration of the Atomic Vapor Laser Isotope Separation (AVLIS) technology at the SIS facility is likely to be cited by other nations as precedent for their own development and use of AVLIS technology for the purification of plutonium. This will increase nuclear proliferation and terrorism risks in non-nuclear weapons states that are now beginning to reprocess commercial spent fuel to separate out plutonium for use as fuel in nuclear power reactors.

A non-weapons state could seek to justify AVLIS plutonium purification on the grounds that it would increase the efficiency of burning plutonium fuel in reactors and reduce radiation exposure to workers who fabricate the fuel. But purification would make plutonium far more attractive than it already is to nations or terrorists for constructing nuclear explosive devices. Spread of SIS technology thus would increase the risk of diversion or theft of plutonium for use in weapons.

Operation of an SIS-type plant in a non-weapons state could produce unprecedented amounts of purified plutonium 239, the primary explosive ingredient in nuclear weapons. Production of plutonium 239 on this scale in a non-weapons state would enable such a country to undertake a sizable nuclear weapons program.

The Safeguards/Verification Burden

The safeguarding of an SIS-type plant by the International Atomic Energy Agency (IAEA) would present a formidable task for which the IAEA has no previous experience and is ill-equipped. Aside from purified plutonium 239, safeguards would have to be applied to unprecedented quantities of the isotopes 240 and 241 that would be separated out in the purification process. For example, an estimated 1/2 metric ton (MT) of plutonium 240 would

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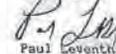
be produced in the purification of the 8-9 MT of fuel-grade plutonium now available to the SIS plant, representing a new safeguards burden to DOE. Both forms of plutonium must be safeguarded because they represent potential, although not ideal, materials for use in weapons.

Furthermore, the operation of an SIS plant could have an unintentional adverse effect on verification of future arms-reduction agreements between the United States and the Soviet Union. The possibility of arms-control verification of nuclear warheads by the passive detection of neutron emissions could be completely thwarted by using the SIS plant to "clean up" the plutonium used in existing warheads in order to reduce the plutonium 240 concentration from 6 per cent to about .01 per cent.

We urge you to reconsider the Department's planned construction of the SIS plant. Proceeding with the plant would do serious damage to the United States' long-standing national-security objective of discouraging and inhibiting further nations or terrorists from acquiring nuclear weapons. In view of the acknowledged surplus of plutonium in the U.S. nuclear arsenal, there are no clear national-security benefits that offset the obvious nuclear proliferation and terrorism risks, as well as safeguards and verification problems, posed by the planned construction and use of the SIS plant.

Thank you for your attention to this important matter.

Sincerely,



Paul Leventhal

President, Nuclear Control Institute, on behalf of himself and the following co-signers:

Dean E. Abrahamson	Denis Hayes	David Oronoff
Peter Bradford	William A. Higinbotham	Russell Peterson
Peter Clausen	Milton M. Hoenig	George Rathjens
Thomas Davies	Robert C. Johansen	Judith V. Reppy
Kreman Dyson	Allan Krass	Roger Richter
Harold Feiveson	Betty Lall	Gerard Smith
Bernard Feld	Jennifer Leaning	Theodore B. Taylor
Donald Geesaman	John Marshall Lee	Kosta Tsipis
David Hafemeister	Franklin A. Long	Frank von Hippel
Chalmers Hardenbergh	Michael Nacht	Paul Warnke

cc: Members of the Armed Services Committee

Nuclear Control Institute, Paul Leventhal, President  
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## SIGNERS OF THE SIS LETTER

May 26, 1989

Dean E. Abrahamson is a professor at the University of Minnesota's Hubert H. Humphrey Institute of Public Affairs.

Peter Bradford is a former commissioner of the Nuclear Regulatory Commission.

Peter Clausen, formerly an analyst for the Department of Energy and the Central Intelligence Organization, is director of research for the Union of Concerned Scientists.

Rear Admiral Thomas Davies (Ret.), former assistant director of the U.S. Arms Control and Disarmament Agency, was head of its non-proliferation bureau and was chairman of the U.S. delegation to test ban and environmental warfare negotiations.

Freeman Dyson, professor of physics at Princeton's Institute for Advanced Study, has been a consultant to the Defense Department and the U.S. Arms Control and Disarmament Agency.

Harold Feiveson, a research scientist at Princeton University, is a former member of the science bureau of the U.S. Arms Control and Disarmament Agency.

Bernard Feld is a professor of physics at the Massachusetts Institute of Technology.

Donald Geesaman is a professor at the University of Minnesota's Hubert H. Humphrey Institute of Public Affairs.

David Hafemeister, professor of physics at the California Polytechnic University, is a former special assistant to the Undersecretary of State on non-proliferation matters.

Chalmers Hardenbergh is editor of the *Arms Control Reporter*, a publication of the Institute for Defense and Disarmament Studies.

Denis Hayes, former director of the U.S. Solar Energy Research Institute, is now chief executive officer and chairman of Renew America.

William A. Higinbotham is a consultant to the Technical Support Organization of the Department of Nuclear Energy at Brookhaven National Laboratory.

Milton M. Hoenig, scientific director of the Nuclear Control Institute, was at the U.S. Arms Control and Disarmament Agency in 1979-80.

Nuclear Control Institute, Paul Leventhal, President  
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Robert C. Johansen is a senior fellow at the University of Notre Dame's Institute for International Peace Studies.

Allan Kraas is a professor of physics and science policy at Hampshire College.

Betty Lall is director of arms control verification studies at the Council on Economic Priorities.

Jennifer Leaning, M.D. is chief of emergency medical services of the Harvard Community Health Plan.

John Marshall Lee is a retired vice admiral, U.S. Navy.

Paul Leventhal, president of the Nuclear Control Institute, formerly was on U.S. Senate staff with principal responsibility for efforts leading to enactment of the Nuclear Non-proliferation Act of 1978.

Franklin A. Long, professor emeritus of chemistry at Cornell University, is a former assistant director of the U.S. Arms Control and Disarmament Agency.

Michael Macht is a professor in the School of Public Affairs at the University of Maryland.

David Ozonoff, M.D. is chief of the Environmental Health Section of the Boston University School of Public Health.

Russell Peterson, vice-chairman of the Better World Society and president emeritus of the Audobon Society, is a former director of the Congressional Office of Technology Assessment.

George Rathjens, professor of political science at the Massachusetts Institute of Technology, was chief scientist in the Office of the Special Assistant to the President for Science and Technology.

Judith V. Reppy is associate director of the Peace Studies Program at Cornell University.

Roger Richter is a former nuclear safeguards inspector of the International Atomic Energy Agency who served in the Euratom section.

Gerard Smith, chairman of Consultants International Group Inc. and of the Arms Control Association, was chairman of the U.S. SALT I delegation and former Special Representative and Ambassador-at-Large for Non-proliferation Matters.

Theodore B. Taylor is a consulting physicist and former deputy director for technology at the Defense Nuclear Agency.

Kosta Tsipis is director of the Massachusetts Institute of Technology's Program in Science and Technology for International Security.

Frank von Hippel is a faculty affiliate of the Center for Energy and Environmental Studies and Center for International Studies at Princeton University.

Paul Warnke is a former Assistant Secretary of Defense (ISA) and director of the U.S. Arms Control and Disarmament Agency.

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Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Fax: (925) 422-1776  
Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

These comments supplement the oral testimony from Nuclear Information and Resource Service presented at the Washington, DC hearing.

1/31.04

Through this letter we are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

2/08.02

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and

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highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2/08.02  
cont.

2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at

LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

3/34.01  
4/33.01,  
25.01

3. The SWEIS proposes to increase the at-risk limits for tritium

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3/34.01, 4/33.01, 25.01 cont.

ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature

5/27.01

6/37.01

**Nuclear Information and Resource Service, Diane D'Arrigo**  
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6/37.01 cont.

for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.

7/26.01 8/26.03

9/26.04

7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.

10/39.01

8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground

Nuclear Information and Resource Service, Diane D'Arrigo  
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10/39.01 cont.	<p>nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
11/35.01	<p>9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.</p>
12/14.01	<p>10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.</p>
13/22.01	<p>11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New</p>

Nuclear Information and Resource Service, Diane D'Arrigo  
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13/22.01 cont.	<p>Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.</p>
14/20.05	<p>12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.</p>
15/01.01	<p>13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).</p>
16/07.01	<p>Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.</p> <p>The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.</p>
	<p>Sincerely,</p> <p>Diane D'Arrigo Nuclear Information and Resource Service 1424 16th Street, NW, Suite 404 Washington, DC 20036 202-328-0002 ext. 16 dianed@nirs.org</p>

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**Nuclear Watch New Mexico**

**Comments to the  
National Nuclear Security Administration  
On the  
Draft Site-wide Environmental Impact Statement  
For Continued Operations of  
Lawrence Livermore National Laboratory and  
Supplemental Stockpile Stewardship and Management PEIS**

May 27, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Via fax: (925) 422-1776 and email ([tom.grim@oak.doe.gov](mailto:tom.grim@oak.doe.gov))

Dear Mr. Grim:

Nuclear Watch of New Mexico (NWNM) is pleased to submit the following comments to the Department of Energy's (DOE's) National Nuclear Security Administration (NNSA) on the Draft Site-wide Environmental Impact Statement for Continued Operations of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management PEIS (the "LLNL SW/SPEIS").

1/02.01 We find the LLNL SW/SPEIS to be a highly flawed, even obsolete, document that builds on mistaken premises that leads to misguided and foregone conclusions. The underlying incorrect premise is embodied in the following:

The nuclear weapons stewardship goal is to ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile. Achieving these goals requires the continued operation of LLNL. Draft LLNL SW/SPEIS, p. 5-2.

Both assertions contained in that statement are wrong. The fact is that Lawrence Livermore National Laboratory (LLNL) could be severely damaged by a major seismic event at any point in time and the United States would still be left with an overwhelming and very robust nuclear deterrent. Moreover, it is becoming increasingly arguable that "the nuclear weapons stewardship goal" is not aimed toward ensuring the safety, security, and reliability of the U.S. nuclear weapons stockpile. Instead, the NNSA's so-called Stockpile Stewardship Program appears intent

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1/02.01 cont.

upon introducing major modifications and even possible new designs to the U.S.'s nuclear weapons stockpile. This flies in the face of the obvious logic of avoiding the introduction of uncertainties into an already extensively proof-tested stockpile. Further directly undermining the Program's purported rationale is the fact that the NNSA has been chronically behind in its Stockpile Evaluation Program, the routine nuts-and-bolts operations for maintaining stockpile safety and reliability. Instead, the NNSA has heavily invested taxpayers' money into very expensive speculative experimental facilities with possible future new-design applications.

For these reasons and more, we conclude that things are not as the NNSA portrays them to be. It seems obvious to us that the real directive for the Stockpile Stewardship Program is coming from the 2002 Nuclear Posture Review (NPR), which broadened the justification for the future use of nuclear weapons and their expanded potential targeting. To cut to the quick, we believe that the NPR is the policy driver for the dramatic expansion of nuclear weapons activities contemplated in the LLNL SW/SPEIS.

The LLNL SW/SPEIS does not entirely omit discussion of the NPR. The document does state of particular interest to DOE and NNSA is the third element of the new triad, which reflects a broad recognition of the importance of a robust and responsive nuclear weapons infrastructure in sustaining deterrence. In this respect, the nuclear posture review notes that the flexibility to sustain the U.S. nuclear weapons stockpile depends on a robust program for stockpile stewardship and peer-review-based stockpile certification. LLNL SW/SPEIS, p. 8-2.

What the LLNL SW/SPEIS omits is discussion of the NPR's directives to pursue the potentially destabilizing Robust Nuclear Earth Penetrator, Advanced Concepts (generally understood to be "mini-nukes"), the capability for possible wholesale replacement of existing designs with new designs, and shortening the lead time in which to return to full-scale testing. These developments will likely have profoundly long-term adverse nonproliferation consequences, particularly with respect to the U.S.'s assumed global WMD policing role.

2/08.01 More narrowly, LLNL's main site is a poor location for expanded nuclear weapons activities. It is already hemmed in by suburbs, has hazardous activities densely packed within 13 square miles, is highly vulnerable to external attack, has suffered repeated security infractions, and is certain to experience major seismic events over time. Additionally, LLNL's Site 300 is subject to ever increasing encroachment by urbanization. Moreover, nuclear weapons activities at LLNL are largely redundant to those at the Los Alamos National Laboratory (LANL). LANL is already well into the process of a \$2.5 billion modernization of its plutonium chemistry and pit fabrication facilities and has extensive facilities for tritium research and target loading. Both Los Alamos and the Pantex site in Texas have facilities for manufacturing weapons high explosives. LLNL's Site 300 flash radiography facilities are duplicative to those available at Los Alamos and the Nevada Test Site. In short, LLNL is a mostly unneeded and redundant Cold War anachronism, unfortunately situated in a vulnerable and risky location.

This is a situation that could and should have been avoided, and for which there is ample precedent. In 1995, the DOE's own Advisory Board Task Force on Alternative Futures (the "Galvin Commission") recommended a "restructuring of weapon design capabilities" among the three nuclear weapons laboratories. The Galvin Commission noted that the restructuring would affect "primarily weapon design capabilities, where the largest functional redundancy exists.

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2/08.01 cont.	<p>and specifically Lawrence Livermore National Laboratory." The limited range of options inherent to the official alternatives in the LLNL SW/SPEIS is an arbitrary and artificially constrained analysis, rather than the "hard look" required by the National Environmental Policy Act at the range of reasonable alternatives. There is no consideration of a Galvin Commission-like alternative for phasing out redundant weapons R&amp;D and stockpile support functions of questionable safety at the Livermore site. For example, it is noteworthy that the level of lab employment for the LLNL SW/SPEIS "Reduced Operations" Alternative (10,000 employees) is higher than it was in 1989, during the last years of the Cold War.</p>
3/02.01 31.01	<p>The alternatives offered in the LLNL SW/SPEIS don't begin to reflect a reasonable range of alternatives for LLNL's future missions. Three of DOE's stated most important missions, Nonproliferation, Homeland Security, and Energy Research, are given short shrift in the "Statement of Purpose and Need" that supposedly underlies the agency's Proposed Action. Even though these missions are arguably more important to US national security today than rebuilding or further developing nuclear weapons, the LLNL SW/SPEIS fails to present alternatives that focus on these missions, accompanied by a significant contraction of the core nuclear weapons programs.</p>
4/01.01	<p>Another obvious defect of the document is that it contains no consideration of the reasonably foreseeable impacts on nuclear weapons proliferation, both vertical and horizontal. These impacts can stem from restarting laser isotope separation facilities for weapons purposes, developing detailed physics models and computer algorithms for simulating each stage of the nuclear explosion sequence, and/or using fissile materials in the National Ignition Facility. With respect to the later issue, this is a step that DOE expressly told Congress it was not interested in while requesting construction funding in 1997.</p>
5/01.03	<p>There is also the matter of the number of nuclear weapons that LLNL has designed for the "enduring" stockpile and would therefore pay a custodial role in maintaining. Those designs are the W62 and W87 intercontinental ballistic missile warheads, the W84 cruise missile warhead, and the B83 bomb. These warhead types currently account for only 20% of the total US "war reserve" stockpile, and by 2009 this fraction is likely to diminish to around 15%. The approximately 400 W84 warheads have no delivery system - all Ground Launched Cruise Missiles were eliminated under the terms of the 1987 INF Treaty - and are not maintained as part of the "active" nuclear weapons stockpile. Implementation of the "operationally deployed" strategic force reductions agreed to in the 2002 Moscow Treaty on Strategic Offensive Reductions (SORT) would result in the retirement of all 600 remaining W62 warheads from the stockpile by 2009.</p>
2/08.01 cont.	<p>Within the LLNL SW/SPEIS's 10 year planning horizon, the Lab will have only two warhead types, the W87 and the B83, remaining in the stockpile. The W87 is undergoing a major multi-year "Life Extension" program that will finish this FY 2004. The refurbishment of some 650 B83 strategic bomb is not planned within the next five years. But the NNSA is pushing advanced development of a Robust Nuclear Earth Penetrator (RNEP) modification of the B83 megaton-range bomb that is highly controversial, an issue that a near majority in Congress is clearly uncomfortable with. One wonders whether the growing momentum for the RNEP is partly to give LLNL's redundant weaponsers something compelling to do.</p> <p>Our overall point is that over the next five years LLNL will have only a small bona-fide workload related to the support of its 1,200 actively deployed weapons in the U.S. nuclear</p>
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2/08.01 cont.	<p>stockpile. This creates a clear window of opportunity to restructure and consolidate nuclear weapon stockpile support functions at Los Alamos and Sandia Albuquerque National Laboratories. Clearly, it makes no sense to maintain a separate \$1 billion per year NNSA weapons program at LLNL to support a mere 15% of US stockpile warheads, when those responsibilities could be transferred to the New Mexico Labs. This should be considered as a "Reasonable Alternative" for detailed analysis in the LLNL SW/SPEIS.</p>
6/30.02, 08.02, 31.04, 33.01	<p>Overriding all of this are the new security initiatives that DOE Secretary Spencer Abraham announced on May 7, 2004. His announcement was preceded by an April 27, 2004 hearing on the security of nuclear materials held by the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform. That hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium storage at various DOE sites, with a particular focus on the vulnerability of special nuclear materials at LLNL. This led Abraham to commit to considering removing the special nuclear materials at LLNL by 2005. This is, in effect, an acknowledgement by DOE that security at LLNL is questionable and the storage of special nuclear materials vulnerable. This, in turn, makes clear that the LLNL SW/SPEIS must evaluate alternatives that would remove all such materials from the Lab. Given the Secretary's pronouncements, this is not only a reasonable alternative, but can also be deemed as a readily foreseeable outcome within the LLNL SW/SPEIS planning horizon.</p>
<p>In our opinion, Abraham's announcement has effectively rendered the LLNL SW/SPEIS obsolete - this draft document has simply been overtaken by events. This is not just a matter of the storage of the special nuclear materials themselves. It also includes the nuclear weapons programs that work directly with these materials. The May 7, 2004, DOE press release explicitly said "[t]he consolidation effort would... assess whether defense-related work at Lawrence Livermore National Laboratory in California could be relocated, allowing removal of special nuclear material from that facility." (Emphasis added.) Thus, we believe the LLNL SW/SPEIS's proposed action to expand nuclear weapons activities at LLNL has been turned on its head by the DOE Secretary himself. We respectfully suggest that the LLNL SW/SPEIS must consider NEPA alternatives that dramatically lower nuclear weapons activities at the Lab through the wholesale (or degress thereof) relocation of those programs and their related special nuclear materials. To do otherwise is to ignore reality and invite legal vulnerabilities. Specifically, the draft LLNL SW/SPEIS's should be reissued.</p>	
<p>Conversely, the present LLNL SW/SPEIS' Proposed Action doubles the limit for plutonium at the Lab from 1,540 pounds to 3,300 pounds. The administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in the surrounding environs, and residences are built right up to the fence. Plutonium in certain forms can spontaneously ignite and poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. The LLNL SW/SPEIS needs to seriously consider the de-inventorying of the plutonium, highly enriched uranium and tritium stocks at the Lab, in alignment with Secretary Abraham's newly announced security initiatives.</p>	
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7/37.01	<p>LLNL is to help lay the groundwork for a new plutonium bomb plant that will cost taxpayers billions of dollars to construct, hundreds of millions to operate each year, and billions more to clean up. The "Modern Pit Facility" would, according to DOE plans, produce 125-450 pits per year to maintain a Cold War-sized nuclear arsenal. Yet, the United States is awash in plutonium pits, with over 10,000 intact warheads and another estimated 12,000-15,000 pits in storage at the Pantex plant in Texas. Despite assertions to the contrary, the U.S.'s nuclear weapons stockpile is not subject to near-term degradation caused by the effects of plutonium aging, as the NNSA and some congressional members have claimed. Studies by the DOE's own lab scientists have shown plutonium pits are lasting longer than previously believed. Clearly, the Modern Pit Facility proposal is grossly premature before conclusions are reached on pit aging from current "accelerating aging" experiments, due at the end of 2006. It then follows that the LLNL SW/SPEIS is also premature in considering the Lab's role in developing pit production technologies for the MPF.</p>
8/27.01	<p>The LLNL SW/SPEIS revives a project that was canceled more than 10 years ago because it was dangerous and unnecessary. Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS), now called the "Integrated Technology Project" (ITP) and the "Advanced Materials Program" (AMP), is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP/AMP is a health risk and a nuclear proliferation nightmare. They should be cancelled as the Plutonium AVLIS was cancelled in 1990, this time to never again be resurrected.</p>
9/26.01, 26.03	<p>The LLNL SW/SPEIS proposes to add plutonium, highly enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for possible new-designs. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.</p>
10/39.01	<p>The LLNL SW/SPEIS calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated. Any new nuclear testing would likely be for a new weapon design, which we believe is not compatible with our long-term national security interests (we are specifically pointing to the future Robust Nuclear Earth Penetrator).</p>
11/35.01	<p>The LLNL SW/SPEIS mixes bugs and bombs at Livermore through its so-called No Action Alternative. An advanced bio-warfare agent facility (a "BSL-3") will be co-located with nuclear weapons activities in a classified area at the Lab. This BSL-3 facility will perform genetic modification and aerosolization experiments with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty - and it poses a risk to workers, the public and the environment in the Bay Area. The LLNL SW/SPEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated. National</p>

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11/35.01 cont.	<p>biodefenses should be enhanced under the auspices of the Department of Human Health and Services and the Centers for Disease Control.</p>
12/22.01, 20.05	<p>A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the Waste Isolation Pilot Plant in New Mexico, yet the LLNL SW/SPEIS says this is exempt from environmental review. This work should be included in the review. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the LLNL SW/SPEIS should provide a guarantee to that effect.</p>
	<p>- End of Comments -</p>
	<p>Respectfully submitted, Jay Coghlan, Director</p>

Nuclear Watch New Mexico - Comments on the Draft LLNL SW/SPEIS  
May 27, 2004 - Page 6

Nuremberg Actions, Greg Getty  
Page 1 of 1

Nuremberg Actions, Greg Getty  
Page 1 of 1

Attn. Spencer Abraham,

To Tom Grini,

Dear DOE Chief,

Dear DOE;

1/32.02

1/32.02

In 1996 the International Court of Justice put an end to any substantial legal question about the mass murder being discussed here today. If we are not to all be complicit with the crime should not the honorable representatives proposing that we consent to radioactive forms of mass murder being perpetrated on our behalf, be challenged for their participation and made to answer for charges of 182,187 violation, conspiracy to murder, if the U.S. Attorney General will not act on the Title 18 section 1116, 1117 violation. And specifically as a Title 18 violation can you assure me you will forward this information and complaint to the U.S. Attorney General as required under the Ethics in Government Act. (Section 535 (b) of Title 28)

In 1996 the International Court of Justice put an end to any substantial legal question about the mass murder being discussed here today. If we are not to all be complicit with the crime should not the honorable representatives proposing that we consent to radioactive forms of mass murder being perpetrated on our behalf, be challenged for their participation and made to answer for charges of 182,187 violation, conspiracy to murder, if the U.S. Attorney General will not act on the Title 18 section 1116, 1117 violation. And specifically as a Title 18 violation can you assure me you will forward this information and complaint to the U.S. Attorney General as required under the Ethics in Government Act. (Section 535 (b) of Title 28)

Dated: 4-27-04

Dated: 4-28-04

*Greg Getty*  
Greg Getty, c/o Nuremberg Actions  
P.O. Box 1637, Pittsburg, Ca. 94565  
925-746-1168

*Greg Getty*  
Greg Getty, c/o Nuremberg Actions  
P.O. Box 1637, Pittsburg, Ca. 94565  
925-746-1168

Office of Peace, Justice, and Care of Creation, Dominican Sisters of Mission San Jose, CA, Stella Goodpasture, OP  
Page 1 of 4

P.O. Box 7405  
Oakland, CA 94607-0405

Office of Peace, Justice, and Care of Creation  
Dominican Sisters of Mission San Jose, CA

May 4, 2004

Tom Grim  
Document Manager  
NNSA Livermore Site Office, L-293  
7000 East Ave.  
Livermore, CA 94550-9234

**Comments on the Site-Wide Environmental Impact Statement (SWEIS) for the Lawrence Livermore National Laboratory for the next ten years.**

1/04.01 We are Dominican Sisters writing to express our grave concern over the Ten Year Plan for Livermore, especially in view of current US foreign policy. We address you representing more than 300 members of our Congregation, living and working in California and beyond. We have a strong commitment to peace, justice, and to environmental issues. Our Congregation has taken a well-considered Corporate Stance on Nonviolence and Peace, which reads as follows.

*As Dominican Sisters of Mission San Jose, we are committed to a stance of nonviolence and peace. We hold a vision which reverences and affirms the dignity of each person and seeks to bring the Gospel to bear with depth and compassion on the critical issues of our times. There is no more critical issue today affecting the peace and welfare of the whole human family than the impending attack on Iraq by the United States.*

*Therefore, we stand in opposition to a United States pre-emptive strike against Iraq or any other nation. We implore the United States to respect the UN process. We are committed to this in view of the Gospel mandate for peace, justice, and the care of all life.*

2/02.01 Many US Dominican Congregations of Women have opposed the production, storage, and planned usage of nuclear weapons, whether on earth or in outer space. Three Dominican women religious now serve terms in federal prison for their opposition to nuclear weapons. We wish to submit some of their statements, knowing these represent the opposition of their congregation and of many religious persons of every faith in this country and around the world. Dominicans are in 150 countries of the world.

*If you want peace, work for justice. Pope Paul VI*

\*\*\*\*\*

Office of Peace, Justice, and Care of Creation, Dominican Sisters of Mission San Jose, CA, Stella Goodpasture, OP  
Page 2 of 4

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3/32.04 *"We, women religious, naming ourselves SACRED EARTH AND SPACE PLOWSHARES II, come to Colorado to unmask the false religion and worship of national security so evident at Buckley AFB in Aurora, the Missile Silos, and the Colorado Springs Schriever AFB (The Space Warfare Center), the Air Force Space Command Center at Peterson AFB, Cheyenne Mountain (NORAD), and the Air Force Academy. We reject the mission of these along with the U.S. Space Command and Stratcom in Omaha, NE*

*"As Roman Catholic sisters, we feel an urgency to break our complicity and sound an alarm to the madness of these times. We must abide by God's law, which challenges the United States government on both the national and international levels. We in the U.S. are losing our humanity. (Sisters Carol Gilbert OP, Jackie Hudson OP and Ardeth Platte OP) (In the "plowshares action" the sisters took, they symbolically "disarmed" the Minuteman III missiles, which have three 335-kiloton nuclear warheads. One missile has 80 times the power of the atomic bomb dropped on Hiroshima. The U.S. has approximately 5000 Minuteman III missiles on alert in the Great Plains.)*

4/01.01 We now consider the present possession and planned use of nuclear weapons in the light of The National Security Strategy of the United States of America of September 2002 which dedicates the US to a global struggle "between liberty and totalitarianism", and states that "to defeat this threat we must make use of every tool in our arsenal—military power...reaching "to all who harbor terrorists—because the allies of terror are the enemies of civilization". The Strategy states that what we say is right is right "for all people everywhere". This Strategy goes on to say that in defending the United States, "we will not hesitate to act alone, if necessary, to exercise our right of self-defense by acting preemptively against such terrorists..." (pp. 1-6 National Security Strategy)

What we read in this document is born out in the events concerning Iraq. The people of Iraq are suffering subjected to brutality, human rights violations, and threat to life under the unjust, illegal, and immoral U.S. occupation of their country. We have many Dominican Sisters in Iraq, and this policy is very personal to us. With the People's Forum on Peace for Life in Seoul, Korea, October 13, 2003 at the International Ecumenical Conference on Terrorism in a Globalized World, "we lament the wanton loss of life, destruction of communities, and mounting injustice because of the greed and arrogance of the Empire. In solidarity with victims of injustice and people in struggle against all forms of oppression, we are driven to reclaim the gift of life given us by God: 'I have set before you life and death...Now choose life, so that you and your children may live.' Deuteronomy 30:19"

"Encouraged by the U.S. Doctrine of pre-emptive strikes, Israel has bombed Syria on the pretext of self-defense, inflicting further violence, this is state terrorism. We condemn state terrorism in all its forms. The war on terror has militarized problems-solving—a doctrine supported by a crusade-like theology of 'us verses them,' which has spread everywhere—resulting in increased arms trade, stockpiling of weapons, and disturbing use of the military in domestic law enforcement in one country after another."

In U.S. policy, there has been clear unilateralism, disregard for the processes of the United Nations, lack of full disclosure, deceitful statement of intention, with the current resulting catastrophe. Will we get to the point of nuclear weapons? All people would recognize the stupid horror of that, and yet we have been on the brink of such use in

Office of Peace, Justice, and Care of Creation, Dominican Sisters of Mission San Jose, CA, Stella Goodpasture, OP  
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*Page 3*

4/01.01 cont. several past wars. Use of such weapons lies within our military doctrine. It may be the end game of our vision of domination.

2/02.01 cont. We believe that to increase our nuclear weapons program (and to work on biological and other chemical weapons) is to disregard world opinion. It is to disregard the good of the human family, to disregard its fears, to disregard the aspirations of its youth, to disregard its desire for a peaceful future, to *disregard its hope for a future free from terrorism.*

5/01.03 Currently we bully other nations with our arsenal of nuclear weapons, while forbidding them similar weapons. In the process we make more and more enemies, and give 'justification' for whatever kind of terrorism others can lay hold of. How can we fail to understand that the greatest victory envisioned by such enemies might be to secure and to use against ourselves the weapons with which we hold them hostage to our way of running the world? And, in fact, we are the ones who have spread such technology through our temporary allies. More than 40 nations have nuclear technology and can proceed toward nuclear weapons. It is now that we need, more than ever, to abide by and to strengthen nuclear weapons treaties. We need a firm commitment to nuclear disarmament as a step away from the increase of world terrorism.

If not, "we march like lemmings to the sea" of our own destruction. The "steps" might be those described in a February, 2004, letter from Sister Jackie Hudson, OP., written in her Victorville prison cell:

6/03.01 "Congress has provided over \$6 Billion for research, expansion and upgrades for the country's nuclear capabilities...the administration succeeded in pushing through the repeal of the law banning development of smaller, more useable low-yield nuclear warheads...approved funding for study of a new 'bunker-buster' warhead...approved money for manufacturing new 'pits' (the plutonium cores of warheads)...and tritium, a radioactive gas used to boost the power of warheads..." James Steingold, SF Chronicle 12/67/03

"All of this in the same year that the US votes in the UN were:

4/01.01 cont.

1. Against bringing the Comprehensive Test Ban Treaty (CTBT) into force	Yes - 173	No - 1 (US)	Abstentions - 4
2. Against compliance with the Nuclear Nonproliferation treaty (NPT) calling for total elimination of nuclear weapons	Yes - 164	No - (US and India)	Abstentions - 14
3. Against compliance with the 2000 NPT treaty which includes missile defenses, weapons of mass destruction, weaponization of space and reduction of non-strategic weapons	Yes - 128	No - 6 (including the US)	Abstentions - 41
4. Against pursuing in good faith the obligation of nuclear disarmament as a follow-up on the 1996 opinion of the International Court of Law on the Illegality of Nuclear Weapons	Yes - 165	No - 4 (US, France, Russia and Israel)	Abstentions - 4

Office of Peace, Justice, and Care of Creation, Dominican Sisters of Mission San Jose, CA, Stella Goodpasture, OP  
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*May 4, 2004*  
*Page 4*

4/01.01 cont. 5. Against prevention of an arms race in outer space and the prevention of the weaponization of space

Yes - 174 No - 0 Abstentions - 4 (US, Micronesia and Marshall Islands)\*

7/23.01 Environmentally speaking, the work at Livermore, as well as all stages of the storage, transport, testing, and planned use of nuclear weapons is fraught with danger. We need to recognize that in the plans for new and expanded weapons work at Livermore, we are increasing dangers in our neighborhood --the Bay Area, Livermore, Pleasanton, Mission San Jose--where the children of nuclear workers live. Plutonium has been called the most toxic substance known to man. In the nuclear weapons work, including the plans to resume nuclear testing, it may be said that we human animals, unlike all other animals, soil our worldly nest with pollutants, causing diseases and killing our own children before their time. We endanger the security of our own people and of the planet through the proliferation of nuclear weapons, which, more than weapons of 'mass destruction' are weapons of annihilation. For all the foregoing reasons, with the strongest voice, we object to the ten-year plan for Livermore.

3/32.04 cont. In the words of our Holy Father, we need a 'moral about face.' "The whole world must summon the moral courage and technical means to say 'no' to nuclear conflict; 'no' to weapons of mass destruction; 'no' to an arms race which robs the poor and the vulnerable; and 'no' to the moral danger of a nuclear age which places before humankind indefensible choices of constant terror or surrender. Peace making is not an option commitment. It is a requirement of our faith. We are called to be peacemakers, not be some movement of the moment, but by our Lord Jesus. The content and context of our peacemaking is set, not by some political agenda or ideological program, but by the teaching of his Church." The Challenge of Peace #353 (US Catholic Bishops, 1988)

8/07.01 **We believe that the Livermore Nuclear Weapons Lab should be completely converted to science for protecting our environment.**

*Stella Goodpasture*

Stella Goodpasture, OP  
Mary Sean Hodges, OP  
Mary Virginia Leach, OP  
Promoters of Social Justice  
Dominican Sisters of Mission San Jose, CA

Oldfather, Jonathan  
Page 1 of 1

Osman, Jeffrey  
Page 1 of 8



**Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration**



**Written Comment Form**  
Must be received on or before May 27, 2004

1/08.02 I feel that all plutonium and tritium should be removed from LLNL. Research using these materials is totally inappropriate in a populated area.

2/01.01 Construction of NIF should occur. The use of this facility violates the Non-Proliferation treaty.

3/07.01 LLNL should change its focus from sustaining and producing nuclear weapons of mass destruction to activities that address clean up of the nuclear weapons complex and other research to promote energy independence, renewable energy sources, and meet human needs. LLNL should promote non-proliferation of WMD's. It can begin by recognizing that NIF and plutonium pit manufacturing facilities increase the possibility of nuclear proliferation by violating the NPT.

2/01.01 cont. There are so many ways the extraordinary resources of the lab could improve the environment. The pit facility and NIF create and fuel an environmental and diplomatic disaster. Perhaps the EIS should address the effect on the psychological environment of continued research and development of WMD's.

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

*Jonathan Oldfather*  
158 PINE ST  
San Anselmo, CA 94960

Dear Mr. Grim,

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development.

Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at

3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based

Osman, Jeffrey  
Page 2 of 8

Osman, Jeffrey  
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4/26.01, 26.03 cont. | Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

5/37.01 | 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

6/39.01 | 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

7/35.01 | 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful,

9/07.01 cont. | civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,  
Jeffrey Osman  
Santa Cruz, Calif.

**Osman, Jeffrey**  
**Page 4 of 8**

Expanded Nuclear activity planned for Lawrence Livermore Labs in Livermore, California

URGENT ACTION NEEDED: Public comment period ends May 27. Please cut and paste the following letter (or write your own) into a new email or print out to snail mail. Be sure to sign and date it. If you add additional comments to the letter below, or if you write your own - and if those comments are different than other's comments - those letters must be included in the final environmental impact statement. If you do add comments or write your own letter, please keep a copy of it for further possible action. The DOE will send confirmation that your letter was received - keep this for your files as well. Be sure your comments reach the DOE by May 27!

letters go to:

tom.grim@oak.doe.gov

or snail mail:  
 Mr. Tom Grim  
 DOE, NNSA, L-293  
 7000 East Avenue  
 Livermore, CA 94550

for further information contact Tri-Valley CAREs at (925) 443-7148  
[www.trivalleycares.org](http://www.trivalleycares.org) <<http://www.trivalleycares.org>>

The letter itself is in blue text. Following the letter is information about what DOE & LLL is proposing.

Dear Mr. Grim,

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

10/02.01 I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

**Osman, Jeffrey**  
**Page 5 of 8**

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

11/08.02 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

12/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

13/26.01, 26.03 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

14/37.01 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

15/39.01 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

Osman, Jeffrey  
Page 6 of 8

16/35.01 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

17/04.01 I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

18/07.01 Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,  
Name:  
Address:  
State:

The Department of Energy has released a draft site-wide Environmental Impact Statement on Livermore Lab's planned operations for the coming t e n y e a r s . The law requires DOE to seek public input before moving forward. This is a once in a decade chance to make our voices heard.

DOE and Livermore Lab plan to:  
\_ More than double the plutonium limit at the Lab from 1,540 to 3,300 pounds; \_ Manufacture prototype plutonium bomb cores on site; \_ Heat plutonium and shoot multiple laser beams through the vapor cloud; \_ Use plutonium in National Ignition

Osman, Jeffrey  
Page 7 of 8

Facility (NIF) experiments; \_ Manufacture radioactive tritium targets for NIF, increasing the Lab's tritium at risk limit nearly 10-fold; \_ Undertake activities to speed a return to full-scale nuclear testing; and \_ Collocate a bio-warfare agent research facility with nuclear weapons -- and call it an existing facility even though its operation has been prevented (so far) by Tri-Valley CAREs' legal challenge.

MORE ON THE PLAN TO DOUBLE THE PLUTONIUM AND RAMP UP NUCLEAR WEAPONS ACTIVITIES AT LIVERMORE LAB

The Dept. of Energy has released its draft site-wide Environmental Impact Statement on Livermore Lab's planned operations for the next ten years. Below, please find a short analysis of what is planned and why YOUR PRESENCE AT ONE OF THE PUBLIC HEARINGS IS NEEDED to stop the bomb makers and the pollution that comes with nuclear weapons.

19/33.01 1. This plan will more than DOUBLE the limit for PLUTONIUM at Livermore Lab from 1,540 pounds to 3,300 pounds. To give you some idea of what that means 3,300 pounds of plutonium can make more than 300 nuclear bombs. One microscopic particle of plutonium, if inhaled, can cause lung cancer or other diseases.

20/27.01 2. This plan will REVIVE a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is called PLUTONIUM ATOMIC VAPOR LASER ISOTOPE SEPARATION. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used in a single room from 44 pounds to 132 pounds a 3-fold increase. Plutonium Atomic Vapor Laser Isotope Separation is a health risk and a nuclear proliferation nightmare.

21/37.01 3. This plan makes Livermore Lab the place to test new manufacturing technologies for PRODUCING PLUTONIUM PITS for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year.

22/26.01, 26.03 4. This plan will add PLUTONIUM, highly-enriched uranium and lithium hydride to experiments in the NATIONAL IGNITION FACILITY megalaser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. We must stop NIF and these dangerous, new experiments in it.

23/26.04 5. This plan will allow the MANUFACTURE of TRITIUM TARGETS for the NIF megalaser on site at Livermore Lab. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams nearly 10-fold more. Livermore Lab has a history of tritium accidents, spills and releases.

Osman, Jeffrey

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- |                   |  |
|-------------------|--|
| 23/26.04<br>CONT. | The NIF will increase the amount of airborne radioactivity emanating from Livermore Lab.   |
| 24/39.01          | 6. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground NUCLEAR TESTS. This is a dangerous step back to the days of unrestrained nuclear testing.   |
| 25/35.01          | 7. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced BIO-WARFARE AGENT FACILITY with nuclear weapons activities in a classified area at Livermore Lab. The lab proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. |

Palmer, Janet L.  
Page 1 of 1

Pardee, Thomas and Marjorie  
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BECAUSE OF THIS, I CONSIDER  
moving out of my HOME, AND  
OUT OF LIVERMORE.

Dear DOE:

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,500 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF mega-laser; and, vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

**I AM COUNTING ON YOU!**

I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

Signed: Janet L. Palmer

Address: 156 Barber St.  
Livermore, CA 94550

**To:**

**Mr. Tom Grim**  
**DOE, NNSA, L-293**  
**7000 East Avenue**  
**Livermore, CA 94550**



Thomas and Marjorie Pardee  
1159 Princeton Place  
Davis, CA 95616

Mr. Tom Grim  
DOE  
NNSA, L-293  
7000 East Ave  
Livermore, CA 94550  
Fax: (925) 422-1776

May 24, 2004

Dear Mr. Grim,

1/04.01 We would like to state our objections to the plan to increase the handling of plutonium and the development of nuclear weapons at Livermore Lab

2/02.01 Based on the draft site-wide Environmental Impact Statement on the labs planned operations for the next ten years the limit for plutonium will more than double and a project is to be revived to heat and vaporize plutonium to separate out isotopes. The lab will be made into a testing site for new technologies to manufacture plutonium pits, directed towards establishing a new Modern Pit Facility to produce nuclear weapons - contrary to public and Congressional intent. We wish to state that we, too, oppose this use of the lab for weapons development research.

3/26.01, 26.03 Adding plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility megalaser will serve weapons development and will endanger both lab personnel and the environment we share. Manufacture of tritium targets will increase the risk of accidents, spills and releases for which the lab already has a history, and it will increase the amount of airborne radioactivity emanating from the lab. Collocating an advanced bio-warfare agent facility explicitly advances weapons research at the lab and poses additional risk to lab personnel, the public and the environment. We wish to state that we oppose these plans for weapons research and risk to the environment, the community and the people who work in the lab.

4/39.01 Furthermore, we oppose plans to develop diagnostics for underground nuclear tests because it facilitates unrestrained nuclear testing at large.

Thank you for including these comments in your review of the 10 year plans of the lab and thank you for your effort to keep the lab directed only to peaceful and environmentally safe scientific research.

Sincerely,

Thomas Pardee      Marjorie Pardee  
Thomas Pardee      Marjorie Pardee

SW/SPEIS  
PUBLIC INVOLVEMENT  
DOCUMENT 843

Perdomo, Cristina  
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Perdomo, Cristina  
Page 2 of 4

May 26, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Fax: (925) 422-1776  
Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

1/31.04 Through this letter we are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

2/08.02 1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative

limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

2/08.02  
CONT.

3/34.01 3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3  
4/33.01, grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from  
25.01 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

5/27.01 4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

6/37.01 5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

7/26.01 6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium  
8/26.03 hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not

Perdomo, Cristina

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7/26.01 8/26.03 cont.	only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.
9/26.04	7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.
10/39.01	8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.
11/35.01	9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.
12/14.01	10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.
13/22.01	11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.

Perdomo, Cristina

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14/20.05	12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.
15/01.01	13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).
16/07.01	Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.
	The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.
	Sincerely, Cristina Perdomo
	-- "A patriot is not a weapon. A patriot is the one who wrestles for the soul of her country as she wrestles for her own being" (Adrienne Rich).
	"Un patriota no es un arma. Un patriota es aquel que lucha por el alma de su pais al igual que lucha por su propio bien" (Adrienne Rich).

Perry, Diana  
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Physicians for Social Responsibility, Robert M. Gould, MD, President  
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-----Original Message-----  
**From:** Diana Perry [mailto:dianasperry@yahoo.com]  
**Sent:** Tuesday, April 13, 2004 11:59 AM  
**To:** tom.grim@oak.doe.gov  
**Subject:** Increase in nuclear weapon activities

Mr. Grim,

1/04.01

The plan to expand nuclear weapon activities at the Lawrence Livermore Lab is a very bad idea: in fact, in today's world, the last thing anyone should be doing is to expand nuclear weapons period. It is especially alarming to hear that the amount of plutonium at Livermore Labs would be double the present amount. I also strongly object to the plan to install an advanced Bio-Warfare Agent Facility at the lab. These plans for expansion are beyond dangerous; they are insane. Please urge the Department of Energy to formulate safer plans for Lawrence Livermore, a site near the highly populated Bay Area which would be disastrously affected in the case of a lab accident.

Diana Perry, Berkeley, California



Physicians for Social Responsibility  
 2288 Fulton St., Suite 307  
 Berkeley, CA 94704-1449  
 510-845-8395 • Fax: 510-845-8476  
 info@sfbaypsr.org • www.sfbaypsr.org

May 26, 2004

Mr. Thomas Grim, L-293  
 U.S. Department of Energy,  
 National Nuclear Security Administration  
 Livermore Site Office, SWEIS Document Manager  
 7000 East Avenue  
 Livermore, CA 94550-9234

Fax: (925) 422-1776  
 Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

1/31.04

I am writing, on behalf of the approximately 2,000 members of the SF-Bay Area Chapter of Physicians for Social Responsibility (PSR), to express our deep concerns regarding the profound health and environmental risks posed by the plans to expand the nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. Along with many other professional and community organizations, we believe that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is remarkably deficient in information and analysis, and that consequently it should be corrected and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in the following comments. Issues we would appreciate being addressed include:

2/08.02

1. On the same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this

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 PUBLIC INVOLVEMENT  
 DOCUMENT 1038

Physicians for Social Responsibility, Robert M. Gould, MD, President  
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2/08.02 cont.	<p>not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.</p> <p>2. Instead of reducing the amount of special nuclear materials on-site at LLNL, the current proposal calls for more than doubling the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. In addition, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. This increases what is already an unacceptable risk to those who live in close proximity to LLNL, as well as to the approximately seven million people who live in areas surrounding Livermore. This risk is attributable to the fact that plutonium is difficult to store safely because it can spontaneously ignite and burn when present in certain forms; in addition, plutonium poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. As such, we are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL, rather than to increase them per the present proposal.</p>
3/34.01 4/33.01, 25.01	<p>3. Related to the above, the SWEIS proposes to increase the at-risk limits for tritium ten-fold, from just over 3 grams to 30 grams, and to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. This is because LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, underscoring our position that these amounts should be decreased, rather than increased.</p>
5/27.01	<p>4. We are also concerned that the current proposal would essentially revive the Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS) project that was canceled more than 10 years ago as being dangerous and unnecessary. In its apparent new manifestation as the "Integrated Technology Project" (ITP) and the "Advanced Materials Program" (AMP), this revamped project proposes to heat and vaporize plutonium prior to shooting multiple laser beams through the vapor to separate out plutonium isotopes. We believe that the proposed ITP /AMP, posing a significant health and weapons proliferation risk, should be cancelled permanently.</p>
6/37.01	<p>5. PSR also opposes plans to make Livermore Lab the place to test new manufacturing technologies for producing plutonium pits (the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion), which we believe directly opens up a new dangerous era of nuclear weapons development. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction, enabling the development of the MPF and attendant production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies</p>

Physicians for Social Responsibility, Robert M. Gould, MD, President  
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6/37.01 cont.	<p>at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.</p>
7/26.01 8/26.03	<p>6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.</p>
9/26.04	<p>7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. In addition, we urge cancellation of the NIF megalaser as a reasonable alternative that should be fully analyzed in the SWEIS.</p>
10/39.01	<p>8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. We believe that all work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
11/35.01	<p>9. PSR is strongly opposed to plans for integrating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. While posing a risk to workers, the public and the environment in the Bay Area, the inherently ambiguous nature of such work in the midst of a nuclear weapons facility devoid of transparency threatens to undermine the Biological Weapons Convention and to initiate a new biological arms race. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.</p>

Physicians for Social Responsibility, Robert M. Gould, MD, President  
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12/14.01 10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. The SWEIS needs to address how to mitigate harm done from an earthquake that damages these buildings before they are brought up to code, and LLNL should stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.

13/22.01 11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. Because of the potential health and environmental hazards posed by this work, its entire scope should be included in the review.

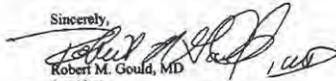
14/20.05 12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.

15/01.01 13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under Article VI of the Nuclear Non-Proliferation Treaty (NPT). In addition, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade, particularly given the significant international health and environmental threats posed by unfolding global climate change.

16/07.01

Physicians for Social Responsibility, Robert M. Gould, MD, President  
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16/07.01 cont. As such, PSR believes that the alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.

Sincerely,  
  
 Robert M. Gould, MD  
 President  
 San Francisco-Bay Area Chapter  
 Physicians for Social Responsibility

Immediate Past-President  
 Physicians for Social Responsibility (National)

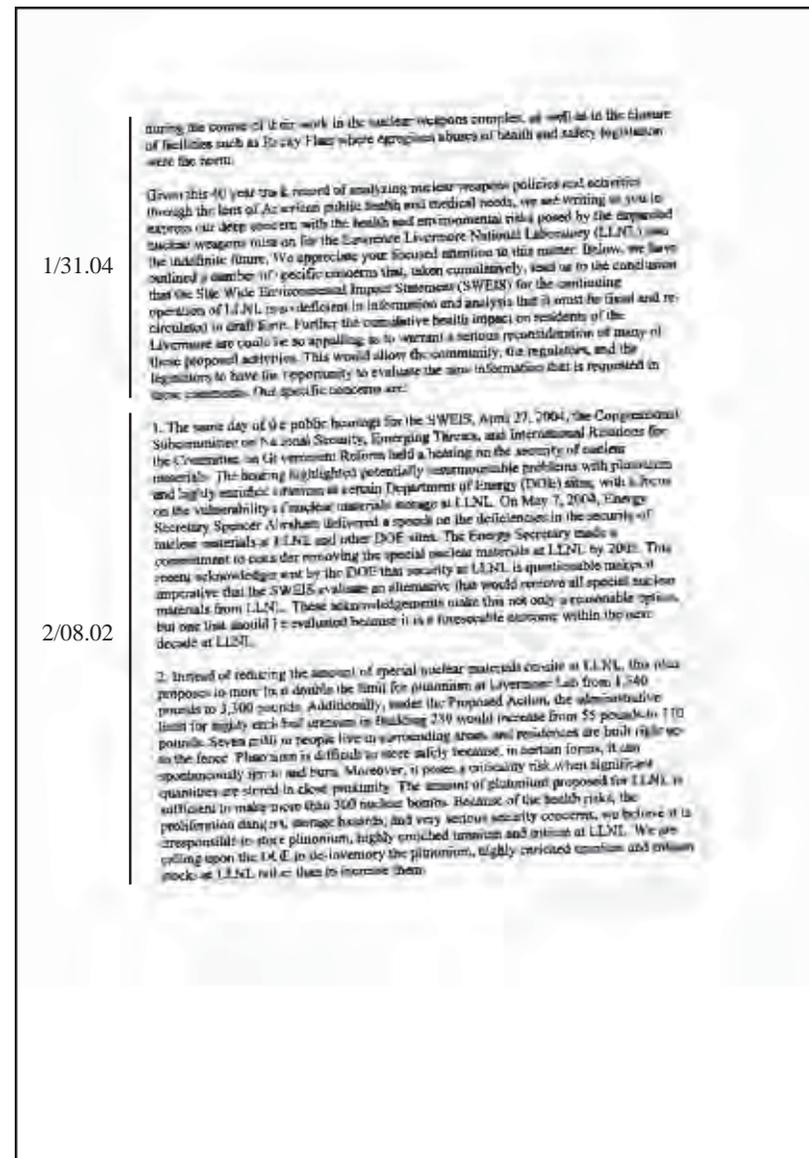
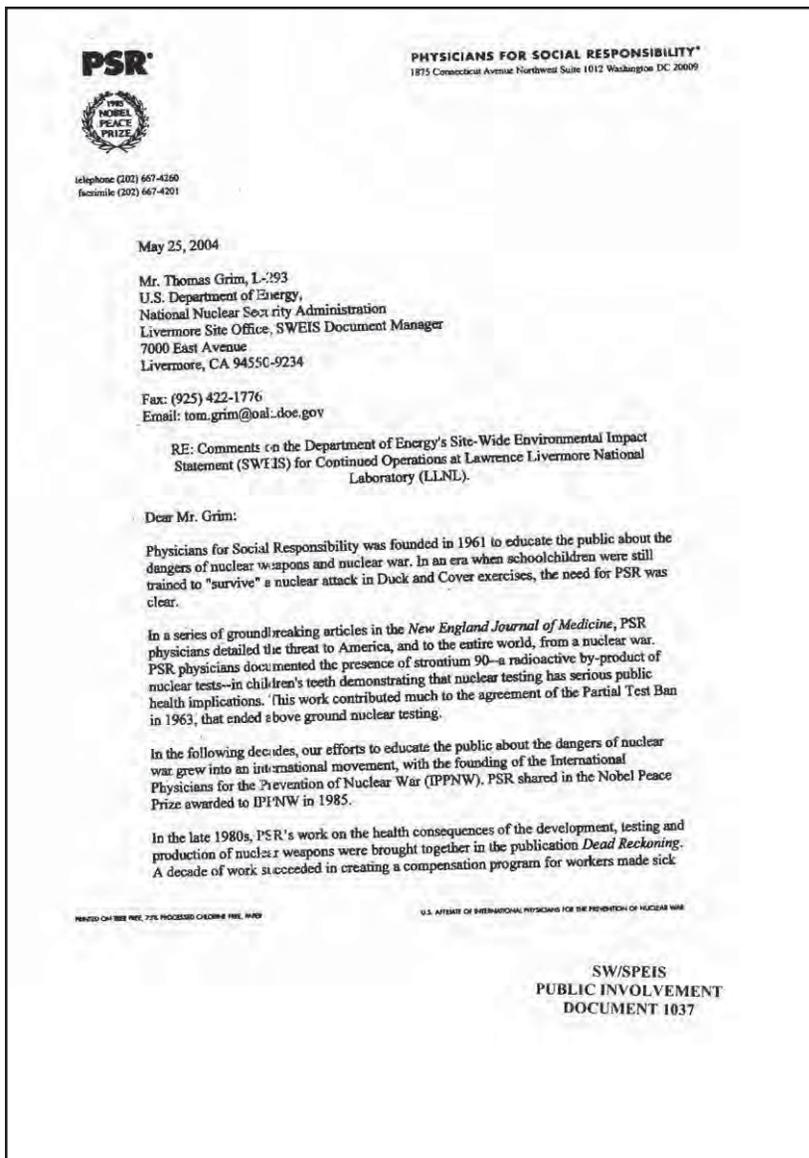
(w) 408-972-7299  
[mrgould1@yahoo.com](mailto:mrgould1@yahoo.com)

cc: Senator Dianne Feinstein  
 Room 331, Senate Hart Office Bldg.  
 Washington, DC 20510  
 email: [michele\\_senders@feinstein.senate.gov](mailto:michele_senders@feinstein.senate.gov)

Senator Barbara Boxer  
 Room 112, Senate Hart Office Bldg.  
 Washington, DC 20510  
 email: [jennifer\\_tang@boxer.senate.gov](mailto:jennifer_tang@boxer.senate.gov)

Physicians for Social Responsibility, Robert K. Musil, Ph.D., MPH,  
 Executive Director and CEO  
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Physicians for Social Responsibility, Robert K. Musil, Ph.D., MPH,  
 Executive Director and CEO  
 Page 2 of 5



Physicians for Social Responsibility, Robert K. Musil, Ph.D., MPH,  
Executive Director and CEO  
Page 3 of 5

3/34.01	<p>2. The SWEIS proposes to increase the at-risk limits for tritium (a) from just over 1 gram to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of reliability violations with plutonium and releases of both tritium and plutonium, making it evident that these limits should be decreased, rather than increased.</p>
4/33.01, 25.01	<p>3. This plan will revisit a project that was canceled more than 10 years ago because of its dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project" (ITP) and the "Advanced Isotopes Program" (AIP). This is a scheme to heat and vaporize plutonium and then allow multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AIP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AIP work should be cancelled as the Plutonium AVLIS was cancelled in 1980 - this time permanently.</p>
5/27.01	<p>4. This plan makes Livermore Lab the place to try new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150,000 plutonium bombs (or a similarly sized ability to run double shifts and produce 300,000 bombs per year). This production capability would approximate the combined nuclear arsenals of France and China each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend its taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.</p>
6/37.01	<p>5. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydroxide to exposure sites in the National Ignition Facility (NIF) when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an enormous cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-promotive and unnecessary new experiments proposed for the NIF.</p>
7/26.01	<p>6. The SWEIS says its plans to manufacture uranium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 1 gram to 30 grams - a ten-fold increase. In the mid-1960s, LLNL found that</p>

Physicians for Social Responsibility, Robert K. Musil, Ph.D., MPH,  
Executive Director and CEO  
Page 4 of 5

9/26.04 cont.	<p>target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellations of the NIF megaproject. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.</p>
10/39.01	<p>7. This plan also calls for Livermore Lab to develop diagnostics of "tailored" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unregulated nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately. If LLNL is to be involved in such a potential resumption of nuclear testing, the full environmental impact of such activities wherever they may occur should be included in the LLNL SWEIS.</p>
11/35.01	<p>8. This plan mixes drugs and hormones at Livermore. It calls for re-creating an advanced bio-warfare agent factory (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty - and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the risks to security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSA-3) research on site at LLNL should be terminated.</p>
12/14.01	<p>9. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the San Francisco Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to keep any work with hazardous, radiological or biological substances that may be occurring in any building that does not comply with federal standards.</p>
13/22.01	<p>10. A contract will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from EPA's consent review. This work in its entirety must be included in the review.</p>
14/20.05	<p>11. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less robust - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect. The likely impact of an accident involving any one of these shipments would be a significant increase in cancers and other</p>

Physicians for Social Responsibility, Robert K. Musil, Ph.D., MPH,  
Executive Director and CEO  
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Pollock, Anneliese  
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14/20.05 cont.	conditions in the affected population. A full analysis of these likely effects needs to be undertaken.
15/01.01	13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and maintaining base within the US nuclear weapons complex. This results in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling, abolishing weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT). While Congress has not approved the development and production of nuclear weapons, and remains unlikely to do so, there is no justification for including such work in the Purpose and Need statement.
16/07.01	Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission finally draws the alternative analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.
	The alternative analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.
	Sincerely,
	Robert K. Musil, Ph.D., MPH Executive Director and CEO, Physicians for Social Responsibility

APR 21, 2009

1/04.01	<p>Dear Mr. Grim:</p> <p>I am writing to oppose the Environmental Impact Statement on Livermore Lab's planned operations for the next ten years. I am a student in high school in Palo Alto, and frankly, I was shocked to learn that plutonium, bombs, and anthrax are being produced less than two hours away from my home. But no matter where places such as Livermore Labs exist, I strongly oppose the places of their nature.</p>
2/33.01	Increasing the plutonium limit at labs requiring plutonium atomic laser separation, and enabling
3/27.01	the production of bomb cores
4/37.01	would have grave environmental consequences, such as increasing
5/17.04	the amount of airborne radioactivity. In addition, our country's production
6/01.01	of nuclear (and biological weapons) sends the wrong message

Pollock, Anneliese  
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Portis, Leal  
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6/01.01  
cont. to other countries: that we support these kinds of warfare and encourage their existence.

1/04.01  
cont. I urge you to oppose the ten year plan at Livermore Labs.

Sincerely,  
Anneliese Pollock  
360 Monroe Drive  
Palo Alto, CA 94306  
apollock@ix.netcom.com

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**Lloyd & Leal Portis**

From: "Lloyd & Leal Portis" <hopione@sbcglobal.net>  
To: <tom@oak.doe.gov>  
Sent: Wednesday, April 21, 2004 9:38 PM  
Attach: ATT00008.htm  
Subject: Plans for Lawrence Livermore Lab

Dear Mr. Grime,

Even though I live many land miles from the Lawrence Livermore Lab I am greatly concerned about the plans of operation for the next 10 years. Of particular concern is the increase in airborne radioactivity from the planned manufacture and testing of potential weapons. Combining this activity with the biowarfare agent research facility seems to be a definite threat to the health and welfare of all Northern Californians. It also appears to be breaking one of our treaty agreements.

1/04.01,  
17.04 As a child I lived in the Bay area during World War Two. I grew up with the knowledge that the government released some biological agents outside the Farallon Islands so that the prevailing winds would carry the germs to all the population in the Bay area. The governments plans for the Lawrence Livermore Lab seem to me to be another case of our government not caring about the welfare of its citizens.

Please register my opinion as being against the planned research projects.

Thank you, Leal Portis

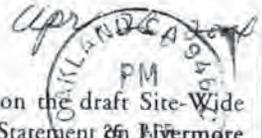
*I tried to send the above to you by email & times - each time it was deleted*  
*Leal Portis*

4/28/2004

Postcard Campaign  
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Priebat, Martha K.  
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Dear DOE:



Here is my comment on the draft Site-Wide Environmental Impact Statement ~~on~~ Livermore Lab operations over the next ~~ten~~ years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF mega-laser; and, vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

1/01.01  
2/04.01  
3/07.01

I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

Signed: Dorothy Christie

Address: 6 Mont Vista Ave  
Vallejo CA 94596

MARTHA K. PRIEBAT  
3375 NORTON WAY #2  
PLEASANTON, CA 94566

My family moved to Livermore in 1966. I raised my children here and today they are both married and raising their families in this valley. In fact, one family lives within a mile of the Plutonium building. My grandson is now in 3<sup>rd</sup> grade at Arroyo Seco School, right beside Big Trees park. Both the school grounds and park been shown to be contaminated with plutonium.

1/33.01,  
34.01,  
17.04

When I read your long and involved document, I felt concerned, even frightened, by your plans to more than double the amount of Plutonium stored at Lawrence Livermore Laboratory. You also want to increase the amount of Tritium ten-fold. This is truly frightening to me. I believe LLNL should be looking for ways to decrease the plutonium and tritium stored in this densely populated area, and was happy to read recently that DOE has some thought of doing this. Our valley is already contaminated with both of these highly radioactive and dangerous elements. Big Trees Park, Arroyo Seco School grounds, and many of our private yards and gardens are contaminated. Over the years, there have been accidental releases of both these elements. The Lab does not have a good history of preventing these accidents. Yet you want to increase the amount of both elements stored at the Lab. You want to double the amount of plutonium stored when, as the SWEIS states, "no pathway for LNLL to dispose of excess plutonium currently exists". Will my great-grandchildren grow up with the specter of still-radiating plutonium decomposing here? I would like to see an analysis in the Sweis of what will be needed to handle possible storage of this still-dangerous Pu 50 or 75 years from now.

2/30.01

This amount of Plutonium stored here would make Livermore into the 6<sup>th</sup> largest nuclear power in the world! Livermore would have materials equivalent to the current nuclear arsenal in all of France. This would certainly make us at high risk for terrorist attacks. The SWEIS should analyze the need for increased security and show a plan to protect us from terrorist attacks. It should also analyze the extent of loss, casualties and contamination in the case of a successful terrorist attack.

3/25.01

I read that you want to increase the amount of Plutonium that can be stored in one room at any given time by 3-fold, to 132 pounds. The SWEIS does not analyze the increased risk of accidents from this amount of Plutonium stored in close proximity. This analysis should be included in the document.

4/34.01

Next, I would like to talk about your plans for Tritium. This is a gas at all normal temperatures and pressures, a gas that is not absorbed by HEPA filters and, indeed, very easily escapes to the environment. In the past there have been large accidental releases. An early one was tracked as far as Fresno. The current SWEIS mentions expectation of losses of Tritium during experiments. Now you want to increase the amount of "at risk" Tritium 10-fold in order to fill the targets needed for experiments in the NIF. This increase will surely cause more Tritium releases to our environment. In fact, the SWEIS accepts this as a fact. Past studies have shown high level of radioactivity in wines from

Priebat, Martha K.

Page 2 of 2

4/34.01

cont.

Livermore grapes. The radioactivity decreased as the use of Tritium at the Lab decreased. I think the SWEIS should include an analysis of the increase in risk to the environment from this activity, the increase in radioactivity in the wines, and the commercial effects this will have on our wineries. I also would expect an analysis of

5/16.01

filling the targets at a more isolated place and the risk associated with shipping filled targets to Livermore.

6/08.02

Finally I am faced with the entire idea of increases in plutonium and tritium in this densely populated area. Our valley is already contaminated and this contamination has not been well-studied. Instead of increasing the tritium and plutonium stored and used at LLNL, I would like an analysis of ways to decrease the amount of both elements stored and used at the lab.

7/33.01,

30.01,

34.01

Please consider analyses of long-term storage of Plutonium, increased risk of terrorist attacks, and risk associated with increased storage of both Plutonium and Tritium. Thank you for your time and attention.



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1 included in the record and will count as much as if  
2 they have been read.  
3 I will give people a warning at the four  
4 minute mark if you've run that long, to allow you to  
5 gracefully conclude your comments. I will also call  
6 the name of the next speaker so that you can be  
7 prepared to come forward and save time. Given the  
8 number of folks who have signed up and if we all go  
9 five minutes we are going to be here a good deal more  
10 than the next three hours, so I will urge people to be  
11 cogent. If anybody has any real scheduling problems,  
12 if they absolutely have to leave for any reason before  
13 their assigned moment or if you have some health  
14 problems that restrict you in terms of the time you can  
15 sit, again see the folks at the front desk and we will  
16 try and accommodate you.  
17 There have been suggestions that we try and  
18 move to a larger room that will be -- that will  
19 accommodate everybody with better air-conditioning and  
20 such. I think our plans now are to -- we have asked  
21 the hotel to try and arrange that. So at the point  
22 where we are contacted and we can expeditiously move to  
23 the next room, we will take a break and do that. So  
24 that is by way of introduction. Tom Grim will be  
25 serving as the hearing officer for the National Nuclear

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1 Security Agency. With that we will begin our public  
2 comment period. Do you have anything to add?  
3 MR. GRIM: A show of hands, anybody who is on  
4 the list to speak and has a health issue that needs to  
5 go for health reason, needs to go and give their  
6 comments first in line.  
7 MR BROWN: If there are any Alaska natives who  
8 find this heat oppressive, you can -- okay. Well, if  
9 in the course of people speaking if you begin to feel  
10 faint and all that stuff, tell the people out front and  
11 as long as everybody doesn't do it all at once we will  
12 try and accommodate you.  
13 The other thing, I am working off a sign up  
14 sheet. It appears some folks were so anxious to speak  
15 that their calligraphy deserted them and so I will do  
16 my best to interpret but please bear with me on this.  
17 I may often read your address or your affiliation in  
18 order to make sure --  
19 Also, since -- thanks for having your cell  
20 phone on and reminding me that if people would please  
21 turn their cell phones off; that is just a polite thing  
22 for folks that have very important comments.  
23 So we will begin. Our first signed up speaker  
24 is Mary with Tri-Valley Cares. If you are here. Hi.  
25 Welcome, thanks for coming.

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1 MS. PERNER: Thank you. Good afternoon. My  
2 name is Mary Perner and I have been a resident of  
3 Livermore for 16 years. Within the past year I have  
4 become active with an organization called Tri-Valley  
5 Cares, which means Citizens Against A Radioactive  
6 Environment.

7 Thank you for providing me and others with the  
8 opportunity today to comment on the draft site-wide  
9 Environmental Impact Statement. There are many issues  
10 in the SWEIS that have concerned me; but, today I would  
11 like to focus on the issues of tritium releases into  
12 the environment of our community and the fact that with  
13 the winds that prevail in our area, they may also  
14 spread elsewhere.

15 Tritium is a radioactive form of hydrogen. It  
16 is used for thermo nuclear weapons and fusion research.  
17 It's a gas and it escapes very easily. Tritium in the  
18 environment binds with available water. This provides  
19 ready, easy access to all living things and much of it  
20 has been found in vegetation in this area over the  
21 years.

22 Now, according to the Department of Energy's  
23 draft site-wide environmental impact statement for the  
24 Lab there is to be in the proposed action a ten-fold  
25 increase in day to day work with tritium at the Lab.

1/17.02

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1 Tritium's half life is 12 years, so every release into  
2 our environment will add decades of radioactive  
3 material to our valley. We may drink the water. We  
4 may drink wine that is produced in our valley. We may  
5 eat the foods from our gardens or from local farmers  
6 markets and it will be ingested into our body for many  
7 years to come.

8 I urge the DOE to assess the long-term effects  
9 of tritium and the history of tritium -- the history of  
10 tritium releases from Livermore Lab and its impact on  
11 our City on our region. When the Lab was created here  
12 50-plus years ago we were a sparsely populated area.  
13 There was an uneasy alliance between the cowboys and  
14 the scientists for many years and now there has been a  
15 great deal of development in this area. We now live in  
16 an urban region containing 7 million people.  
17 Livermore's population since I have been here has just  
18 greatly, greatly increased. The people who are living  
19 in the vicinity of the Lab are now right across the  
20 street. They are not in a general neighborhood, they  
21 are right there side by side neighbors with the Lab, so  
22 the situation has been changing over time. I urge the  
23 site-wide Environmental Impact Statement to take that  
24 into consideration.

25 Accidents with tritium are almost unavoidable

1/17.02  
cont.

2/23.01

1/17.02  
cont.  
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1 because of its gas state. There has been two large  
2 accidental releases, one in 1960 and another in 1974.  
3 In one of those releases, the wind carried tritium over  
4 the Altamont Pass and it swept into the central valley.  
5 Tests were done on vegetation in the path of these  
6 releases and it was found to be significantly elevated  
7 in radiation. The winds in our area are changeable and  
8 they can sweep over a 50 mile radius, as I mentioned  
9 earlier.

1/17.02  
cont.

10 MR. BROWN: One minute remaining.  
11 MS. PERNER: Thank you. Also, we are a  
12 seismic area so that would increase the risk of  
13 releases. Okay.

3/14.01,  
25.01

14 Livermore is known for its wineries. There  
15 are over two dozen wineries in this area. They  
16 comprise a significant part of our economic base. If  
17 tritium releases increase, as the site-wide  
18 environmental impact proposes, that they will increase  
19 ten-fold, if this increase should occur, it is  
20 definitely going to affect not only our health but our  
21 economic base. I would think that the wine growers in  
22 this area would have some feelings about that also.

1/17.02  
cont.

23 MR. BROWN: A ten second summary.

24 MS. PERNER: Okay. I want to thank you for  
25 allowing me to make this statement. I urge you to

1 again reconsider with regard to your plans for tritium. | 1/17.02  
2 MR. BROWN: Thanks very much. | cont.

3 During the break, a set of car keys was found  
4 here, so if this looks familiar to anybody, I will  
5 gladly return them to you.

6 Our next speaker is Stewart, I think Bunstock  
7 and Stewart will be followed by Barry Lubovoski.

8 MR. BUNSTOCK: I am Stewart Bunstock. I live  
9 up by Sacramento so I am not as concerned, as perhaps  
10 as most of you with the proximity of my home and my  
11 children. Perhaps that tritium release that Mary  
12 talked about was a good thing since we have another  
13 million years before we have to worry about something  
14 like that; but I guess I am not sure how this process  
15 works. My question is more -- speaks to do we need the  
16 nuclear weapons and I don't know that this situation  
17 speaks to that. We have removed ourselves from the  
18 antiproliferation treaty and I think that is a bad  
19 thing for the world, whether you live in Livermore, in  
20 Europe or Arabia. I don't see why we need to have  
21 them. Our President is now talking about small nuclear  
22 weapons. Well, now, wait a minute, I thought we were  
23 concerned about terrorists getting a hold of the larger  
24 ones. My understanding is that things that are larger  
25 are harder to carry around and conceal. So I am

4/02.01

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1 wondering why -- maybe, maybe this is defaulting to  
2 that we have to expand this because we need these  
3 weapons but I would say perhaps we don't need those and  
4 if we don't need the weapons then we don't need the  
5 expansion and I am not sure that this environment, this  
6 talk is dealing with that issue, so I don't know if  
7 these are pertinent questions -- but, I remember during  
8 the Reagan administration they talked about development  
9 of a neutron mortar or neutron weapon which would kill  
10 someone as I recall, everyone within a quarter of a  
11 mile; within three-quarters of a mile diameter over a  
12 period of time, very long agonized deaths and anybody  
13 outside of three miles it is pretty clear. Well, that  
14 is just a little mortar type thing. It just seems to  
15 me that this development of Livermore to develop these  
16 weapons, if we don't need the weapons we don't need to  
17 develop the site and it becomes a moot point. And that  
18 is all I have to say, I just don't think we need them.  
19 I don't think the world needs them.

20 MR. BROWN: Barry, if you can pronounce your  
21 last name correctly for the court reporter.

22 MR. LUBOVOSKI: I will give him my business  
23 card.

24 MR. BROWN: Sasha Sovejec from Green Law  
25 University of Washington will follow thank you.

4/02.01  
cont.

1 MR. LUBOVOSKI: My name is Barry Lubovoski. I  
2 am secretary treasurer for the Building and  
3 Construction Trades Council of Alameda County AFLCIO.  
4 Our Council represents 28 local unions that work in the  
5 area in Alameda County and of that approximately 40,000  
6 workers that live and work in Alameda county.

7 In 1997 the various trade unions began work  
8 under a project labor agreement on what is known as the  
9 conventional facilities and that is the buildings that  
10 house the NIF project, three buildings in all. At the  
11 peak of that construction approximately 400  
12 construction workers were working and that project went  
13 from 1997 to 2001. In 2001 the beam path and the real  
14 guts of the ignition facility which included the beam  
15 path and all of the other infrastructure that makes up  
16 the works of the fusion machine that's inside began  
17 construction. That also was covered under the project  
18 agreement. That peaked also, once again, at  
19 approximately 400 workers working on that project. In  
20 addition to that the Building Trades Council represents  
21 approximately 100 workers that work year round on  
22 maintenance of that facility and other facilities at  
23 the laboratory.

24 The Building Trades Council in the past has  
25 looked very carefully at this process. It is a very

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1 difficult process. It certainly raises a lot of issues  
 2 that are raised in the society, both political issues  
 3 and very specific environmental concerns and  
 4 mitigation. The council's position is the following:  
 5 That the council supports the environmental impact  
 6 identification process, to the extent that that process  
 7 identifies important issues that must be mitigated and  
 8 the mitigation measures to be taken and the Building  
 9 Trades Council feels that upon completion of that  
 10 process and upon the proper identification of  
 11 mitigations and the implementation of those mitigations  
 12 that, in fact, at the end of that process, that the  
 13 laboratory should continue on. The laboratory has,  
 14 among a number of features one, and that is that it  
 15 employs a number of people. It is an economic engine  
 16 within the Livermore area and brings about both very  
 17 vociferous support and very vociferous opposition  
 18 because of the underlying political issues that must be  
 19 addressed, but: having considered all of that, the  
 20 Building Trades Council, the unions see a lot of  
 21 workers who have jobs not only as a direct result of  
 22 the work directly at the Lab, but for each dollar spent  
 23 at the Lab, there are jobs that are created that spin  
 24 off of that. So at the end of the process we believe  
 25 that it is appropriate for the Lab to stay there with

5/04.01

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1 shipments of waste to Livermore.  
 2 MR. BROWN: You have got one minute left.  
 3 MS. SOVEJEC: Thank you. We also noted that  
 4 in this document the Department of Energy bases a great  
 5 deal of its analysis on permits that were actually  
 6 maxed out in 2002 and, of course, if this environment  
 7 impact statement results in a plan that is implemented  
 8 we will have increases in a number of hazardous  
 9 materials at the Livermore site which ostensibly will  
 10 need new permits or will exceed the permits and we  
 11 would like to see the analysis looking at the new  
 12 permits that will have to be used. We would also like  
 13 to see this analysis cover more than ten years because  
 14 as we know radioactive waste lasts a heck of a lot  
 15 longer than that so we encourage the Department of  
 16 Energy to go back and do what would be a reasonably  
 17 foreseeable -- an analysis of reasonable foreseeable  
 18 impacts of waste that will last a very long, long time.  
 19 Finally, I would like to touch a bit on  
 20 transportation of radioactive waste. As the gentleman  
 21 pointed out, waste can travel in a corridor that  
 22 extends from Hanford, Washington, down to  
 23 South Carolina. A lot of discussion surrounding Yucca  
 24 Mountain which may or may not end up housing a lot of  
 25 our high level waste from around the country indicate

5/04.01  
 cont.

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1 relevant here if we engage in a new generation of  
2 nuclear weapons production. Josh will be addressing  
3 our proliferation analysis, our analysis of the  
4 analysis and Jason will be addressing the conclusory  
5 and self validating method with the EIS used in its  
6 analysis throughout. I will be talking about the  
7 management of waste and -- siting of waste and also  
8 transportation. As I said we come from very near  
9 Hanford. Hanford is the most contaminated site in the  
10 western hemisphere. It is home to 54 million gallons  
11 of high level nuclear waste which were stored in 177  
12 tanks. These tanks now contain 53 million gallons as a  
13 million of them have leaked into the groundwater. We  
14 are also home to low level waste and mixed waste and  
15 are up at the top of list for siting for low level and  
16 mixed waste from around the country. TRU waste which  
17 is implicated in this document is also sent to Hanford.  
18 And interestingly enough, is subject to a preliminary  
19 injunction at this point which we don't know how long  
20 will extend which may affect the ability of other sites  
21 to send TRU waste to Hanford.

22 In our review of the document we noted that  
23 the Department of Energy has acknowledged that no  
24 pathway to dispose of plutonium currently exists. We  
25 also noted that the document tells us that 1,000 drums

6/22.02

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1 of TRU waste are set for transport. The EIS does not  
2 say, as I just told you, that Hanford has -- is subject  
3 to a preliminary injunction on importation of TRU  
4 waste, that there may be conditions which prevent  
5 certain TRU waste from getting to the WIPP right away  
6 and this may affect the siting and transportation of a  
7 great deal of radioactive waste. What's going on right  
8 now is a great deal of shuffling of radioactive waste  
9 because of course the Department of Energy hasn't  
10 thoroughly analyzed or told us about in their  
11 environmental impact statement where the waste will be  
12 sited where it will ultimately end up. I noted with  
13 great interest that while waste is going to be created  
14 at Livermore and ostensibly sent away from Livermore,  
15 Livermore will be receiving waste from Lawrence  
16 Berkeley National Laboratories. And a couple of years  
17 ago I reviewed some Department of Energy documents and  
18 found very interesting that Lawrence Berkeley National  
19 Laboratory sent to Hanford for six years shipments  
20 which they marked and which Hanford stored as low level  
21 waste which actually turned out to be mixed radioactive  
22 waste. We call these in Washington, Washington State,  
23 dangerous waste and I think that gives us an indication  
24 of the depth of analysis that's needed but is not in  
25 this Environmental impact statement with regards to

6/22.02  
cont.

7/36.01

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1 shipments of waste to Livermore. | 7/36.01  
2 MR. BROWN: You have got one minute left. | cont.

3 MS. SOVEJEC: Thank you. We also noted that  
4 in this document the Department of Energy bases a great  
5 deal of its analysis on permits that were actually  
6 maxed out in 2002 and, of course, if this environment  
7 impact statement results in a plan that is implemented  
8 we will have increases in a number of hazardous  
9 materials at the Livermore site which ostensibly will  
10 need new permits or will exceed the permits and we  
11 would like to see the analysis looking at the new  
12 permits that will have to be used. We would also like  
13 to see this analysis cover more than ten years because  
14 as we know radioactive waste lasts a heck of a lot  
15 longer than that so we encourage the Department of  
16 Energy to go back and do what would be a reasonably  
17 foreseeable -- an analysis of reasonable foreseeable  
18 impacts of waste that will last a very long, long time. | 8/22.03

19 Finally, I would like to touch a bit on  
20 transportation of radioactive waste. As the gentleman  
21 pointed out, waste can travel in a corridor that  
22 extends from Hanford, Washington, down to  
23 South Carolina. A lot of discussion surrounding Yucca  
24 Mountain which may or may not end up housing a lot of  
25 our high level waste from around the country indicate | 9/31.02

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South Carolina. A lot of discussion surrounding Yucca  
Mountain which may or may not end up housing a lot of  
our high level waste from around the country indicate | 10/20.01

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1 that waste will travel through maybe 44 of the 50  
2 states. This is a heck of a lot of highways where  
3 people will be and a lot of communities that will be  
4 affected and we are very concerned about the inadequacy  
5 of the exploration of what happens when we transfer  
6 radioactive waste around the country. | 10/20.01  
7 MR. BROWN: If you can make a concluding  
8 statement. | cont.

9 MS. SOVEJEC: I would like to conclude by  
10 entering a few documents into the record.  
11 Unfortunately, we didn't have a projector but I have  
12 some documents which you are welcome to look at at the  
13 Tri-Valley Cares table and which later will end up in  
14 the Department of Energy hands and we also have a  
15 document on behalf of 20 students from the Green Law  
16 from Washington, thank you.

17 MR. BROWN: Okay, Josh next. Josh will be  
18 followed by Jason Morgan.

19 MR. PIPER: Hello. As Sasha introduced me my  
20 name is Josh Piper I am also from the University of  
21 Washington Law School. In continuing with some of the  
22 far reaching effects not considered in this document,  
23 the effects that reach Washington, that reach the rest  
24 of the world, Green Law organization is concerned with  
25 the lack of any discussion of nuclear proliferation | 11/01.01

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1 issues and risks, and a violation of international  
 2 treaties.

3           When a proposed action conflicts with federal  
 4 state or local laws NEPA requires an evaluation of the  
 5 effects of such conflicts. International treaties,  
 6 laws that have been ratified by the US are federal  
 7 laws, the courts have consistently held this view. We  
 8 feel it would benefit the public, the interested  
 9 parties and policy makers in evaluating and determining  
 10 the appropriate action alternative to have all the  
 11 information regarding the effects on applicable  
 12 treaties. This is especially true given part of the  
 13 stated purpose in the document of the continued  
 14 operation of the lab is that it is critical to  
 15 preventing the spread of nuclear weapons world wide.  
 16 The EIS does say that treaty compliance will be  
 17 considered at the ROD or record of decision stage but  
 18 we feel this subverts many purposes of NEPA including  
 19 public review of whether these proposed projects  
 20 fulfill the purpose and stated purpose and need for an  
 21 action. It would make sense that violation of  
 22 international treaties would be a valid concern for  
 23 those who wish to prevent the spread of nuclear  
 24 weapons, the DOE in this document doesn't fairly  
 25 address it. Moreover this omission is contradictory to

11/01.01  
cont.

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1 DOE's own precedent which have conducted  
 2 non-proliferation analyses in at least four EIS's in  
 3 the last eight years so we are wondering why it is  
 4 absent in this document. Some of the treaties that  
 5 could potentially be impacted: The treaty of the  
 6 Nonproliferation of Nuclear Weapons, The Mission Treaty  
 7 of Control Regime, Start I, Start II, the program of  
 8 Action on Nuclear Disarmament. These are just to name  
 9 a few.

10           And this avoidance of nuclear proliferation  
 11 involves not only the alternatives analysis, but it  
 12 goes to the very heart of the purpose and need of many  
 13 of these projects such as the NIF, Atlas, which is now  
 14 called ITP and the development of some of these smaller  
 15 Nuclear weapons.

16           The rationale of mutually assured destruction  
 17 lacks the quote, logic, it once held. In today's world  
 18 the big enemies of this nation know no borders, no  
 19 locations, they don't fear death or have any political  
 20 accountability, so we feel that our maintenance and  
 21 advancement of Nuclear weapons does nothing to deter  
 22 these enemies and only endangers our citizens more.

23           I would like to touch on a couple other things  
 24 real quick. Accident scenarios in this document, to us  
 25 it seems inadequate to have the effects of a release

11/01.01  
cont.

12/25.08

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1 From a major accident bounded by small aircraft --  
2 small aircraft impact from a local small airport.  
3 Given the proximity of the Lab to several large  
4 regional airports, the omission of the effects from a  
5 large commercial jet crashing is disconcerting. This  
6 concern grows exponentially after realizing that the  
7 probability of these accidents, accident scenarios are  
8 never calculated with the Lab as an intended target of  
9 an attack, they are only calculated as random  
10 accidents.

12/25.08  
cont.

11 MR. BROWN: One minute remaining.

12 MR. PIPER: Given the recent publicity about  
13 the poor security at the Lab, in today's article, to us  
14 these analyses are undeniably inadequate to assess the  
15 risks associated with any proposed actions.

13/30.02

16 Finally, real quick, the EIS fails to meet its  
17 goals of informed agency decision-making required by  
18 NEPA because its inadequate assessment of a reasonable  
19 range to clearly defined alternatives. The document  
20 claims that it considers a reasonable range from the  
21 minimum sustainable which is the reduced action to the  
22 maximum reasonable level which is the proposed action  
23 but instead of considering any real alternatives it  
24 just considers these extremes and the mandated CEQ no  
25 action alternative and we would submit the no action

14/31.01,  
05.01,  
01.01,  
31.04

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1 alternative isn't really a no action anyway since there  
2 are a lot of projects that would continue on.  
3 Just to conclude I would say that the EIS  
4 demonstrates a serious lack of effort on the part of  
5 the DOE to analyze its need for the proposed projects  
6 and moreover the effects of such actions and without  
7 supplemental draft EIS, we at Green Law cannot help but  
8 view the DOE as doing nothing more than robotically  
9 announcing that it is fulfilling the purpose of the  
10 nuclear posture review just to justify decisions  
11 already made by the DOE and to perpetuate the  
12 sophisticated banditry that too often occurs in the  
13 military industrial complex. Thank you.

14/31.01,  
05.01,  
01.01,  
31.04  
cont.

14 MR. BROWN: Jason Morgan and Annie Griffin  
15 will follow.

16 MR. MORGAN: Jason Morgan also with Green Law.  
17 Purpose and need is what I am going to talk about. The  
18 purpose and needs sections of the EIS justify the  
19 continued validity of Lawrence Livermore National  
20 Laboratory in terms of preventing the spread of nuclear  
21 weapons world wide and ensuring the safety and  
22 reliability and performance of a nuclear weapons  
23 stockpile. It is certainly laudable goals. The DOE  
24 further justifies its purpose and need by 1995  
25 statement from the President. Quote: To meet the

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1 challenge of ensuring confidence in the safety and  
2 reliability of our stockpile I have concluded that the  
3 continuing viability of the nuclear weapons lab will be  
4 essential. End quote.

5 Certainly, this is a strong mandate. But the  
6 purpose of an EIS should do more than state the  
7 necessity of a project in conclusory language supported  
8 by a decade old Presidential statement. How do these  
9 projects serve the purpose and need? How do they meet  
10 that need? How can building a bio weapons laboratory  
11 for research help stop the spread of nuclear weapons.  
12 How can it help maintain the nuclear stockpile?

13 Moreover, given the highly toxic nature of TRU  
14 waste and other radioactive and toxic materials that  
15 are produced -- that have been produced and will  
16 continue to be produced at Lawrence Livermore, given  
17 the fact that the maintenance of these products for  
18 their expected life span can stretch into thousands of  
19 years. This creates a servitude on future generations.

20 Given this decision to produce waste that must  
21 be maintained with dollars and lives for a period  
22 longer than that of existing human history, a decision  
23 that leads to a form of inter-generational tyranny.

24 Given the time frame that the EIS looks at is  
25 a foreseeable ten year period, given that this EIS is

15/02.01,  
33.01,  
01.01,  
22.02

1 requiring higher administrative limits to house toxic  
2 materials for which there is no known storage solution.  
3 We would expect that the purpose and need would be  
4 clear and convincing. We would expect that a no action  
5 alternative would really be no action. We would expect  
6 that the DOE would consider the long term environmental  
7 and human costs that are being delivered upon the  
8 nation with clear and precise language. We would  
9 expect that the DOE would consider earthquake safety at  
10 an operational safety level rather than the lower  
11 standard of life safety in light of this important  
12 purpose and need.

13 We would expect that the Department of Energy  
14 would take this opportunity to get the people of the  
15 community and this nation behind the laudable goals by  
16 providing a genuine assessment of the long-term  
17 cumulative and synergistic effects of these projects.  
18 What we see is an attempt to validate existing  
19 Department of Energy decisions by complying with some  
20 of the procedures but none of the heart of the National  
21 Environmental Policy Act. We see this as a decision to  
22 validate existing Department of Energy -- to validate  
23 the decision to use new materials at the NIF. To  
24 validate the existing decision to construct new  
25 facilities, not to help make us understand how to make

15/02.01  
33.01,  
01.01,  
22.02  
cont.  
16/05.01

17/23.02

18/14.03

19/31.05

20/04.01

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1 an informed decision.

2 MR. BROWN: One minute remaining.

3 MR. MORGAN: Rather than being the lap dog of  
4 the executive branch and trailing after a 9-year-old  
5 statement by the President, the DOE should take this  
6 opportunity and use this document to inform the  
7 executive, the community and the public at large of the  
8 ramifications of these projects so that we can all  
9 understand the costs and the harms of following through  
10 with this project. So that we can decide if this  
11 project will satisfy its purpose and need. So that we  
12 can decide if this project is worth the long-term costs  
13 to human life in our environment. Thank you.

14 MR. BROWN: Annie Griffin is next and I  
15 believe it is Hebard Olsen that signed up and they said  
16 maybe, so you have five minutes to decide whether you  
17 need to star on TV.

18 MS. GRIFFIN: My name is Annie Griffin and I  
19 have a public access- -- Annie Griffin and I have a  
20 public access television program in Monterey  
21 California.

22 Specifically, to show what's going on between  
23 our government and ourselves and, indeed, I believe  
24 there is a great separation and I really am beginning  
25 to believe that the government is not friendly to the

15/02.01,  
33.01,  
01.01,  
22.02  
cont.

1 people.

2 I also ask the government, the people that are  
3 in the government and paid by the government, when you  
4 look your children in the eyes, I want you to really  
5 consider joining a human family and not a military  
6 complex that has gone blindly mad.

7 I talked to my godmother in England recently  
8 and she said, she's an American, and she said, she said  
9 Annie, she said, we are hated. Everybody hates  
10 Americans.

11 I was so shocked by that statement. And I  
12 really fear that there is going to be a secret buildup  
13 of all the nations, the European union, Asia, that they  
14 are all secretly behind our backs because they no  
15 longer can trust our government anymore than we the  
16 people can trust our government and that is really sad  
17 to say because of this nuclear buildup. It is really  
18 time to go back to this administration and send a  
19 message that the only thing this Lab is good for is to  
20 learn of ways of solving our nuclear problems. Taking  
21 that waste and storing it safely and reducing, every  
22 way possible that we can. And that's why I say I join  
23 Tri-Valley Cares in the conclusions and recommendations  
24 they have that the curatorship option is the only one  
25 of the five options that we rate as superior or good of

21/08.01

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1 all the five criteria and that is maintaining weapons  
 2 safety and security, maintaining weapons reliability  
 3 and performance, supporting arms control and  
 4 non-proliferation, controlling costs and minimizing  
 5 adverse environmental impacts. Dr. John Golfman was  
 6 asked by the Atomic Energy Commission to have safety  
 7 guidelines because he was so respected because of  
 8 his -- because he shares patents on the fees and  
 9 ability of uranium 233 and on early processes for  
 10 separating plutonium from fission products. So the  
 11 Atomic Energy Commission asked him go and find out what  
 12 a safe level is. And when he came back he said there  
 13 is no safe level. Then he was blackguarded by the  
 14 government. What is happening is that you are getting  
 15 cancer, I have gotten cancer. My father died of  
 16 cancer. No Atomic Energy Commission no DOE official  
 17 came to him and said by the way were you exposed in  
 18 Nevada? Did you go to any these places? No, because  
 19 it is the whole world. We are all breathing the same  
 20 air. We are all one people and we have to join  
 21 ourselves all as one and otherwise we are going to kill  
 22 ourselves and that is going to be our reward.  
 23 So I ask you please stop lying about the  
 24 statistics. Dr. John Golfman said by the year 2000,  
 25 one in four people would have cancer and that is the

21/08.01  
cont.

1 accurate statistic now and we will never be able to  
 2 know who got the little piece of plutonium from some  
 3 released, you know, plant into their lungs and so I say  
 4 to you: Do it for your children. I don't have any  
 5 children. I knew better and I say to all of you that  
 6 have your children, you have an obligation to them  
 7 before you do to George W. Bush, you need to join the  
 8 world community in stopping and in being a leader in  
 9 saying no, we are no longer going to invent these  
 10 triggers that are going to do this and this to you  
 11 because it is a mass annihilation for us all. Thank  
 12 you.  
 13 MR. BROWN: Hebard Olsen?  
 14 MR. OLSEN: Tonight.  
 15 MR. BROWN: Fine. Marylia Kelley is next and  
 16 Loulena Miles will follow.  
 17 MS. KELLEY: I am Marylia Kelley I am  
 18 executive director of Tri-Valley Cares here in  
 19 Livermore. I live on East Avenue barely a quarter mile  
 20 from the Lawrence Livermore National Laboratory.  
 21 Tri-Valley Cares will be submitting long detailed  
 22 technical comments as we are reading at 3,000 pages of  
 23 the document. Today I am going to offer us an overview  
 24 and our group's position on some of the key elements.  
 25 The plan in the site-wide Environmental Impact

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1 Statement will more than double the storage limit for  
2 plutonium here from 1540 pounds to 3300 pounds. It  
3 will increase the tritium storage limit from 30 grams  
4 to 35 grams. Tri-Valley Cares calls on the  
5 Department of Energy to deinventory the plutonium and  
6 tritium levels at Lawrence Livermore not increase them.

23/33.01,  
34.01

7 This plan proposes to revive a project that  
8 was cancelled more than ten years ago and I was part of  
9 making sure it was cancelled ten years ago because it  
10 was dangerous and unnecessary. That project is called  
11 plutonium atomic vapor laser isotope separation. What  
12 they've done is changed the name in this document where  
13 they propose to revive it and call it the integrated  
14 technology project. It sounds like something you could  
15 buy at Good Guys. It is not.

23/27.01,  
31.04,  
01.01

16 This is a scheme to heat and vaporize  
17 plutonium and then shoot multiple laser beams through  
18 the vapor to separate out various isotopes for nuclear  
19 weapons experiments. Also the SWEIS, the site-wide EIS  
20 states that the plutonium AVLIS at Livermore will use a  
21 feed stock of powdered oxides that will first need to  
22 undergo a high temperature processing in a furnace  
23 before it is even put in the thing that vaporizes it  
24 that the laser beams go through to separate the  
25 isotopes. This is an enormous health and environmental

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1 risk as well as non-proliferation risk and Tri-Valley  
2 CARES call the DOE to cancel the project and as an  
3 interim measure the DOE must, under the law include an  
4 analysis of its proliferation risks in the site-wide  
5 EIS and must recirculate that document to us in the  
6 public so we can ascertain the adequacy of that  
7 analysis.

23/27.01,  
31.04,  
01.01  
cont.

8 Also this document proposes new experiments in  
9 the National Ignition Facility Megalaser, adding  
10 plutonium highly enriched uranium and lithium hydride  
11 to experiments in the NIF. Using these materials in  
12 the NIF increases its usefulness for nuclear weapons  
13 development period. That is a flat true statement. It  
14 will make the NIF more hazardous to workers in the  
15 environment. In the 1995 non-proliferation review of  
16 the NIF the DOE said it would not use plutonium fissile  
17 material, other fissile material in the NIF. Now in  
18 2004 they say they will or they plan to. The DOE has  
19 mooted its 1995 non-proliferation analysis. They must  
20 redo it. They must include it in the site-wide EIS.  
21 Again they must recirculate the EIS so that we can  
22 determine the adequacy of that non-proliferational  
23 analysis. That is an interim measure and in the final  
24 analysis I have to say Tri-Valley Cares calls on DOE to  
25 simply stop that project.

24/26.03,  
26.01

25/01.01,  
31.04

26/26.01

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1 The site-wide Environmental Impact Statement  
2 plans to allow the manufacture and packing of tritium  
3 targets for the National Ignition Facility here at  
4 Livermore. This is the tritium filled targets are the  
5 radioactive fuel pellets that NIF's 192 laser beams are  
6 supposed to shoot and attempt to create a thermal  
7 nuclear explosion. Producing the targets will increase  
8 the amount of tritium that is used in any given time in  
9 any one process called the At Risk Limit, as you saw in  
10 Tom's view graphs, tenfold from just over 3 grams to 30  
11 grams.

12 The history of Livermore Lab, this is my  
13 neighborhood, is that every time tritium is used it  
14 gets into the environment. The rain in my neighborhood  
15 has been found to have higher levels of tritium than  
16 can be attributed to anything but Livermore Lab. We  
17 call on the Department of Energy to halt this and I  
18 would note that I was told personally by Lab management  
19 in 1995, Marylia, we would never fill the tritium  
20 targets -- you were there -- we would never fill the  
21 tritium targets here. This is too populated an area.  
22 We will do it in some unpopulated area. Tri-Valley  
23 Cares said don't do it anywhere but sure enough it is  
24 going to be here. We say no.

25 Livermore Lab is proposed to be the place

27/26.04

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1 where they are going to do the technology development  
2 for new plutonium bomb cores. Livermore is going to  
3 make plutonium prototype, plutonium pits for nuclear  
4 weapons. The technologies developed here are supposed  
5 to be used in something called a modern pit facility  
6 which is a new Rocky Flats, folks, which they plan to  
7 build and which will, according to their own documents,  
8 manufacture up the 450 plutonium bomb cores a year with  
9 the ability to have double shifts and manufacturing  
10 900. What does that mean? That is essentially the  
11 entire nuclear arsenal of China and France every year.  
12 That is what that means, including what they call new  
13 design pits, Livermore slated to develop that  
14 technology. We say no. The Department of Energy must  
15 terminate that program period here at Livermore.

16 MR. BROWN: Got a minute left.

17 MS. KELLEY: I will hit two more then.

18 Enhanced readiness to resume full scale nuclear tests  
19 right in the site-wide Environmental Impact Statement.  
20 It says Livermore Lab's developing diagnostics to  
21 enhance the nation's readiness to conduct full scale  
22 underground nuclear tests at the Nevada Test Site. We  
23 say this is a dangerous step back to the days of  
24 unrestrained nuclear testing and we oppose enhancing US  
25 readiness to conduct full scale tests. The DOE must

28/37.01

29/39.01

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1 not develop these technologies here at Livermore. And  
 2 finally, as part of something curiously called the No  
 3 Action Alternative, which is, has a lot of action, let  
 4 me tell you folks, they plan to fix bugs in bombs.  
 5 They plan to co-locate an advanced bio warfare agent  
 6 research facility with nuclear weapons activities in a  
 7 classified area at Livermore Lab. They propose genetic  
 8 modification of bio warfare agents and aerosolization,  
 9 which is spraying them, and this includes live anthrax,  
 10 plague and other deadly pathogens. This can weaken the  
 11 biological weapons treaty again. There is no analysis  
 12 in this document of its impact on treaties. That  
 13 analysis must be done in the document and the document  
 14 must be recirculated so we the public can say whether  
 15 or not they did a good job of that analysis and  
 16 finally, we call on them to cancel those plans. The  
 17 alternatives analysis within the site-wide  
 18 Environmental Impact Statement has to include real  
 19 alternatives. It has to include the possibility of  
 20 focussing on civilian science initiatives at Livermore.  
 21 Things that are good for us, environmental friendly and  
 22 needed in this community and in this world. That needs  
 23 to be analyzed. Thank you very much.

24 MR. BROWN: Loulena Miles and Tara Dorabji.  
 25 MS. MILES: Hello, thank you all for coming

29/39.01  
cont.

30/01.02,  
31.04

31/07.01

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1 here today. My name's Loulena Miles. I am the staff  
 2 attorney at Tri-Valley Cares. I just wanted to talk  
 3 today a little bit about, for example, the plutonium,  
 4 raising of the plutonium level and what that really  
 5 means. They want to more than double the amount of  
 6 plutonium at the Lab from 1570 pounds to 3300 pounds so  
 7 that is the administrative limit. Plutonium is used  
 8 primarily for nuclear weapons development. It is a  
 9 substance that is radioactive for 200 -- well weapons  
 10 grade plutonium is radioactive for 240,000 years.  
 11 There are serious health risks associated with this, as  
 12 small as one microscopic particle of plutonium if  
 13 lodged in the lungs is likely to a cause cancer.  
 14 Plutonium is very difficult to safely store. For one  
 15 thing it is pyrophoric so it can spontaneously ignite  
 16 or combust when it touches oxygen in air when it is in  
 17 certain forms and shapes and it must be stored in very  
 18 small quantities because when you have more than a few  
 19 pounds in close proximity, it can cause a nuclear chain  
 20 reaction or criticality event which can release heat  
 21 and radiation and cause a nuclear disaster. The Lab  
 22 has known about this and has been cited in the past for  
 23 criticality violations by having too much nuclear  
 24 material in proximity. In 1997 there were near a dozen  
 25 violations cited at the Lab for this problem.

32/33.01

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1 Also I just want to say that the Lab is a  
2 small facility. It is 1.3 square miles, Livermore Lab,  
3 8,000 workers and they want to have over 3,000 pounds  
4 of plutonium. The security workers at the Lab have  
5 told us that they cannot -- they could not fight  
6 against a terrorist attack. They would not be able to  
7 defend the Lab and they don't have the proper training  
8 or equipment to do so even if it was possible.

33/30.01,  
30.02

9 This is a huge red flag. We must not raise  
10 the amount of plutonium at the Lab and I want to echo  
11 the General Accounting Office in their request that  
12 Livermore Lab actually get rid of the plutonium on site  
13 next to a highly populated area.

34/08.02

14 Additionally, Livermore Lab sits within 200  
15 feet of Las Positas fault and within one kilometer of  
16 the Greenville fault. It is a very seismically active  
17 area here. There are 108 buildings identified in the  
18 document that have possible seismic difficulties and  
19 the document does not provide a thorough list of what  
20 these buildings are so it is impossible to evaluate  
21 whether these are critical buildings that need to be  
22 retrofitted before they can go forward with any plans  
23 for increased plutonium, plutonium vaporization,  
24 tritium target fabrication, et cetera.

35/14.01

25 One of the main reasons for increasing the

36/27.01

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1 level of plutonium is the AVLIS process, they call it  
2 the integrated project in the site-wide EIS. The AVLIS  
3 process we found to be a shocking proposal to  
4 chemically purify and vaporize plutonium in order to  
5 get, well, they won't tell you exactly what the mission  
6 is, because it is classified, but to get unnamed  
7 isotopes of plutonium separated out. They are going to  
8 be using 220 pounds per year as feed material for this  
9 process of powdered plutonium oxide, mostly powdered  
10 plutonium oxide and that is very dangerous to be  
11 working with.

12 I want to point out that not only is AVLIS  
13 dangerous in terms of potential releases to the  
14 environment but in terms of proliferation of nuclear  
15 weapons in the world. It is a technology that was  
16 stopped in 1990 and there was an out pouring of NGOs  
17 and scientists and even the National Academy of Science  
18 said that this technology should not be developed the  
19 US, the US should not be throwing money into working  
20 all the bugs out of this because what it means is that  
21 you can take plutonium and get weapons grade plutonium  
22 with it in a very undetectable way and it is something  
23 you could do in a university lab or in a barn. It is  
24 something you don't have to have a huge power plant in  
25 order to create weapons grade plutonium so if you

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cont.

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1 wanted to create a few bombs, then this is the  
 2 technology you would want to have.  
 3 The scientists came out against it and said  
 4 this technology forms a bridge between civilian nuclear  
 5 fuel cycles and weapons production, secret weapons  
 6 programs and that could occur in other countries or  
 7 with terrorist groups and so that is something we  
 8 should not be developing at Livermore Lab. They are  
 9 really trying to sneak this out under the radar of the  
 10 general public and we need to raise this as an issue,  
 11 the document needs to -- we need to not allow this to  
 12 occur at Livermore Lab.  
 13 MR. BROWN: One minute left.  
 14 MS. MILES: I wanted to close by talking a  
 15 little bit about the National Environmental Policy Act.  
 16 It is the law that has required this hearing to occur.  
 17 It is intended to enhance public participation in  
 18 government planning.  
 19 Prior to NEPA government decisions were  
 20 primarily driven by technical feasibility and funding  
 21 rather than environmental considerations or health  
 22 considerations. Congress wanted a law that could  
 23 enhance public participation and avoid environmental  
 24 hazards before they started. NEPA holds the inherent  
 25 promise that people who will bear the burden of

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 cont.

1 environmental social and economic impacts of projects  
 2 should have a voice in the decision-making so today is  
 3 our opportunity to use our voice and be heard.  
 4 I urge the DOE to listen carefully, listen to  
 5 the myriad of voices who will breathe the air, eat the  
 6 food, drink the wine, play in the soil and the people  
 7 in the communities who will be affected by these  
 8 projects everywhere and I urge you to think long and  
 9 hard about the Pandora's box you are about to open.  
 10 Think about the disasters that could ensue from an  
 11 earthquake during plutonium vaporization or during  
 12 genetic modification and spraying of bio agents during  
 13 the tritium target fabrication. Think about what would  
 14 happen if a terrorist attack did occur and I hope that  
 15 you listen and really seriously consider the comments  
 16 that are made today. Thank you.  
 17 MR. BROWN: Why don't you finish up and then  
 18 Tara, you are up next. And after that I have an  
 19 announcement about the hotel being ready. Go ahead.  
 20 MS. DORABJI: I want to thank everyone for  
 21 coming out today, first off this is an incredible  
 22 showing and I think it shows how preposterous the very  
 23 plans they are putting forth are. I mean look at this,  
 24 this is 1:00 o'clock, we came together in Livermore, so  
 25 I just want to thank everyone first off and thank you

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1 all for this opportunity and I really hope that you are  
2 listening not just recording but really hearing the  
3 impact and that what people are saying will be  
4 ultimately reflected in the Record of Decision, so we  
5 look forward to seeing that. We look forward to some  
6 sizable changes and we really hope that you will  
7 recirculate this document for public comment once some  
8 of those severe deficiencies we bring up are addressed  
9 so I want to thank you outright for taking this time  
10 and looking into that.

38/31.04

11 The first thing I really want to bring up is  
12 just the accident analysis. Its poor. Its deficient.  
13 I am interested in some of -- I mean just some of the  
14 major things that were left out. For example, they  
15 didn't look at emissions. Like if there was an  
16 accident inside of a building and the workers had to  
17 leave through an emergency exit, that would be an  
18 opening and there would be emissions through that.  
19 They neglected to actually look at that. So I think  
20 that there are some real critical issues with the  
21 accident analyses. They need to be redone and also the  
22 levels of radiation, the dose levels absolutely need to  
23 be looked at. This is a fundamental issue. We heard  
24 Dr. John Golfman's name mentioned earlier. I would  
25 encourage you to look a some of his research and

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25.07

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1 incorporate it into the types of -- what your dose  
2 estimates are and I would also encourage you to look at  
3 the international consensus that says that any amount  
4 of radiation no matter how small, no matter how small  
5 can cause a negative biological reaction and this needs  
6 to be incorporated in -- and beyond that, I want to you  
7 take it to the next level and start looking at  
8 something called the precautionary principal and the  
9 Department of Energy can be a leader in this. Yes. I  
10 really want you to see putting the community first.  
11 You know, it is not that we have to wait 20 years to  
12 proof that cancer came from that plutonium coupled with  
13 that tritium accident and I drank the wine. No. The  
14 community comes first, the people come first and we  
15 want to see that incorporated into the analyses you  
16 do -- a precautionary, you know, looking at the  
17 community first.

40/23.03,  
31.10

18 In addition, I think that as many of the  
19 colleagues earlier brought up, the absolute purpose and  
20 need, you bring up, you know, to really stop world wide  
21 proliferation and that is a wonderful goal and it is,  
22 you know, it is working with international law, Article  
23 6 of the Nuclear Non-proliferation Treaty, yes, that is  
24 wonderful; yet after that you proceed to bring up  
25 numerous proposals which is actually working against

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1 that, plutonium AVLIS, working towards, you know,  
2 enhanced pit production, giving us the capacity to  
3 produce an entirely new arsenal of these new  
4 modified -- you can call them modified I can call them  
5 new but we know that they are different. We know that  
6 stockpile stewardship is upgrading the arsenal. We  
7 know it is working against the nonproliferation treaty  
8 so you have a document which conflicts itself  
9 inherently and I am calling on you to look at stockpile  
10 Stewardship, non-proliferation, there is a  
11 contradiction and you have to make a choice and I want  
12 you to go with international law. I want you to say no  
13 to the Nuclear Posture Review. Yes to international  
14 law. This is your time, this is your power and you  
15 have that -- and you have that responsibility to listen  
16 to international law.

41/01.01  
cont.

17 Further, I just want to go a little bit into  
18 each of the individual, you know, you are talking about  
19 doubling plutonium on site.

20 Now, did you mention that there is elevated  
21 levels of plutonium that have been found in a  
22 children's playground adjacent to an elementary school?  
23 Was it mentioned that plutonium has been released for  
24 decades to the sewage system. Was it mentioned I have  
25 gardened in a garden that has suspect sludge that could

42/33.01

1 be laced with plutonium.

42/33.01  
cont.

2 MR. BROWN: One minute left.

3 MS. DORABJI: So, and you know, I think it's  
4 really these things need to be addressed. It is not  
5 okay to not look at things like there was actually a  
6 study done by the -- that found elevated levels of  
7 malignant melanoma in children born in Livermore, 600  
8 times, and in the draft SWEIS, you say no, we are not  
9 going to look at that. We don't want to. We don't  
10 want to analyze that. That is not okay. You need to  
11 look at why children born here are developing six times  
12 the melanoma than other children in Alameda county.

43/23.02

13 You have to look at this and you have to look at  
14 alternatives. It is not okay to say civilian science  
15 conversion, that is not viable. There are people here  
16 that think it is viable. There is an international law  
17 mandating you to do that precise thing. So it is time  
18 for you to bring your mission into compliance with  
19 international law. You must bring this alternative up.  
20 You must provide us this alternatives analysis and I am  
21 calling on all of you and your colleagues working at  
22 Livermore Lab to make this happen, I have faith that  
23 you can convert this, that you can -- you know, really  
24 we are counting on you to look for, what are we going  
25 to do with this plutonium that is radioactive for

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1 240,000 years. That is a job and you have scientists  
2 and we need you to get them behind that and stop this  
3 development of nuclear weapons, give us viable  
4 alternatives and ones that will be viable for the next  
5 generations. I will conclude with that and ask you  
6 that you can let one more person speak before we go to  
7 break because he has to go back to Berkeley and he came  
8 along way. He is our only -- okay.

9 MR. BROWN: She is very persuasive. Here is  
10 our Berkeley representative. Can you give us your  
11 name?

12 MR. OSCAR: Hi. My name is Oscar and I just  
13 want to say that if people are getting hurt by these  
14 nuclear weapons, I just say stop it and please leave  
15 these people alone because I care about these people  
16 and because the world is important to us and we need it  
17 to survive so all of us can live in the world and if we  
18 are gonna -- if we have vegetables and they are gonna  
19 be like this, then why, why do we have to go and buy  
20 stuff at the store that is sprayed with toxic spray?  
21 Why do we have to do that? It is just not right. So  
22 stop spraying toxic spray. That is all. Thank you.

23 MR. BROWN: All right. I have you on the  
24 list. Okay. The hotel has informed us that they have  
25 got the other room set up. We need a few minutes to

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1 move the Court Reporter and these podiums over there.  
2 So if you want to take a break now, it is probably  
3 easier to stay in this room until we get these things  
4 moved and then we will reconvene over there. It is  
5 larger, more comfortable and thanks for your patience.

6 (Short recess)

7 MR. BROWN: Thanks for your patience. If you  
8 will take your seats, we will get started. Thanks  
9 again, if the folks will take their seats. I know  
10 folks have questions about when their time will occur.  
11 There is a second sign up sheet out front and you can  
12 take a look at what number you are at and get an idea.  
13 Not everyone who signed in chose to speak. So when you  
14 look at that list, take a look over on the right-hand  
15 column in terms of those who said they want to speak as  
16 opposed to those who simply signed in and you can count  
17 the yes's and multiply it by, I am guessing maybe four  
18 minutes rather than five because some people are a  
19 little shorter and again, if people can be as succinct  
20 as possible, that is a real consideration to your  
21 neighbors who signed in.

22 This is a larger crowd than was anticipated,  
23 so we are going to be -- that, of course, is the  
24 purpose of public meetings, is to get as much of the  
25 public as possible, so congratulations to you all but

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1 it does mean that we are running a little later than  
 2 usual. So with that said, let me start.  
 3 Our next speaker is Lorraine with Grandmothers  
 4 For Peace. Lorraine, are you here?  
 5 SPEAKER: Lorraine?  
 6 MR. BROWN: This looks like Lorraine, and the  
 7 last name is maybe Kinshock or something like that.  
 8 SPEAKER: Kaughshock possibly.  
 9 MR. BROWN: It might be Kaughshock.  
 10 SPEAKER: They left.  
 11 MR. BROWN: Maybe they can come back this  
 12 evening. James Thornton said maybe he will speak. Is  
 13 he going to speak?  
 14 MR. Thornton: Yeah, I would like to say a  
 15 little bit.  
 16 MR. BROWN: Come up and James will be followed  
 17 by Jim Ott.  
 18 MR. THORNTON: I'm commonly known as Nate  
 19 Thornton. I've lived 89 years, going on 90, next  
 20 January I will be 90. I fought in Spain against France  
 21 against fascism with my father too and I came back here  
 22 and I went in the shipyards and I worked there against  
 23 fascism and now I see that fascism is creeping into  
 24 this goddamned country and it burns me up, it burns me  
 25 up. War -- we don't need war. We don't need war in

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1 this world. We need peace. We need peace. And let's  
 2 fight for peace. And this thing here that we are  
 3 talking about, this trillium and tritium and neutron  
 4 bombs and all that sort of thing. That's not for  
 5 peace. That's for war. That's the only thing they can  
 6 use it for. And why do they need it? Bush is planning  
 7 to carry on a war from now on. He is not gonna stop  
 8 when he wins in Iraq. He's already planning to go into  
 9 Iran and this is going to continue too as long as Bush  
 10 is in. So we've got to get Bush out, though we got to  
 11 be careful how we get him out. I mean, we don't want  
 12 to get somebody in there that is gonna be just as bad  
 13 as him, do we? So we have got to be careful, be  
 14 judicious about how you cast your vote. I'm not gonna  
 15 tell you how, because I know how I'm gonna do, but -- I  
 16 mean, I think I know how I'm gonna do but when the  
 17 election comes I may vote some other way, I am not  
 18 sure, so I am not gonna tell anybody else how to vote  
 19 right now; but, we have got to end this, this  
 20 development of nuclear arms. We have gone around. We  
 21 have gone into Iraq hoping to destroy weapons of mass  
 22 destruction and here we have them right in our  
 23 backyard. This is the place to start destroying the  
 24 weapons of mass destruction. And if we destroy them  
 25 here, we will begin to make friends around the world.

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1 We won't need the weapons. The people will come to us  
2 as friends and they will respect us, we don't need to  
3 fight 'em. We don't need to kill 'em to make them  
4 respect us, but that's what Bush wants us to do. That  
5 is what our Army is doing in Iraq and they propose they  
6 are going into Iran and do it there and where the hell  
7 next are they going to go after that; but, Bush has  
8 proclaimed permanent war in this world. He's gonna go  
9 on from this one to the next one and I think this thing  
10 here is connected up with this war and I'm against it.

11 MR. BROWN: Thank you.

12 MR. BROWN: Jim Ott is next to be followed by  
13 Bernice Kring.

14 MR. OTT: Hi, my name is Jim Ott. I have  
15 lived here in the Tri Valley area and the Livermore  
16 valley for 19 years, I have two young girls, the  
17 President of a financial institution here in the area  
18 and a Board member of the Las Positas College  
19 Foundation, I teach English also the chairman of the  
20 Livermore Chamber of Commerce and I am here today  
21 representing the members of the Chamber of Commerce and  
22 we couldn't bring all 730 of us here but imagine them  
23 down in the back. I appreciate you not breaking out  
24 into applause when I make comments. I know you have  
25 done that, because I want to get through my talk. You

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1 I may not agree with everything that I have to say, but I  
2 appreciate the opportunity to come up and speak and I  
3 do want to comment on the sincerity of what I have  
4 heard here and frankly I am really surprised to hear so  
5 much enthusiasm and sincerity and interesting  
6 statistics and facts and figures that everyone is  
7 presenting today and I am hopeful that the Department  
8 of Energy does listen to everyone who is speaking.  
9 Together we can make a difference and that's important,  
10 so thank you.

11 From my perspective I want to talk a little  
12 bit about the economic impact of the Lab and the fact  
13 that nuclear weapons are a reality. We can't uninvent  
14 them and I understand the perspective that we need to  
15 reduce them and it is certainly the hope of everyone in  
16 the world that we eventually are able to eliminate  
17 nuclear weapons. Having said that, we need to maintain  
18 the stockpile and I think this is probably where we  
19 have our difference of opinion.

20 The Lab is the largest employer in the City of  
21 Livermore, if I can just shrink it down and talk about  
22 my neighborhood, the neighborhood of the people that  
23 work here. The businesses, the individuals that raise  
24 their children in this community and really I speak, I  
25 think, on behalf of the Tri Valley, Pleasanton, Dublin

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1 and San Ramon, those people that actually live here  
 2 work here and generate their income. Of the 8500  
 3 employees at the Lab approximately 3800 live in  
 4 Livermore. This generates 350 million dollars in  
 5 payroll, just in payroll to people here in the  
 6 community and that's spent on -- for local business,  
 7 people that -- when I say local business, I don't want  
 8 you to think of, when I say a local business I want you  
 9 to think of a man and a woman earning income to put  
 10 their kids through college. 350 million in payroll  
 11 comes in that goes into our schools, goes into our arts  
 12 community that helps improve the quality of life here  
 13 in Livermore. Along with the payroll that does not  
 14 include of the 150 million or so that is spent on  
 15 outside services, goods and services here in the area  
 16 and the almost 600 million dollars the Lab spends out  
 17 in the economy in general.

18 Livermore's original purpose was national  
 19 security, certainly continues to be national security  
 20 and that remains to be its primary focus but it has  
 21 developed expertise in other sciences and research and  
 22 I know you know this, biology, chemistry, lasers, high  
 23 speed computers, studies of the environment in  
 24 improving human health. There is a lot of good that  
 25 comes out this lab. The science and research that has

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1 aided our business community, there is a number  
 2 programs that support small business. I will provide  
 3 this in a written comment as well, but to touch on some  
 4 of the key areas.

5 Technology transfer is an important part of  
 6 the Lab. An example, there is a company called Metal  
 7 Improvement Company out of New Jersey which has located  
 8 a facility here. Metal pining is the process, if you  
 9 think about the pining hammer with the little ball on  
 10 the end of it, you hammer on metal to make it stronger.  
 11 This is a laser device that actually makes metal  
 12 stronger and it will last longer for our airplanes so  
 13 that airplanes don't have to be replaced as quickly.  
 14 The saves us obviously natural resources and saves us  
 15 money. It could be used in the auto industry. There  
 16 is metal pining came here, Metal Improvement Company  
 17 came here in '97 and is here contributing to technology  
 18 and to our area.

19 The Lab is also an important and valuable  
 20 partner with Las Positas College. The college and the  
 21 Lab have a collaboration over the years of providing a  
 22 number opportunities to enhance education for local  
 23 residents and students. This contributes to higher  
 24 education, economic vitality and greater quality of  
 25 life experiences for people that are allowed to go to

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1 college and the Lab supports that in many ways.  
 2 MR. BROWN: One minute.  
 3 MR. OTT: Thank you. On behalf of the  
 4 Livermore Chamber we are in support of the Lab and the  
 5 proposed actions. It is our hope that the Lab will not  
 6 just continue to remain in Livermore but to expand its  
 7 contributions to evolve and grow. We would love to see  
 8 the reduction of the nuclear weapons. The Lab is a  
 9 tremendous asset, it benefits our local quality of  
 10 life, our regional economies and our state economy.  
 11 Both in its efforts to create and transfer valuable  
 12 science and technology to benefit humanity and its  
 13 mission to help ensure the security of the United  
 14 States we are proud that the Lab calls Livermore its  
 15 home. Thank you.

48/04.01

16 MR. BROWN: Thanks very much. Okay. I  
 17 actually see that Bernice had signed in but said not  
 18 speaking today, so let me go on to Phyllis Olin-Western  
 19 and following her will be Fran Rachel.

20 MS. OLIN: Good afternoon. Thank you  
 21 everybody for your patience at this lengthy hearing.  
 22 My name is Phyllis Olin and I am President of the Board  
 23 of Western States Legal Foundation which is an  
 24 organization that was founded in 1982 and analyzes and  
 25 disseminates information about nuclear weapons policy

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1 at all three labs, that's Livermore, Sandia and Los  
 2 Alamos.  
 3 There is not too much I agree with last  
 4 speaker about; but, I do agree we need jobs and I think  
 5 conversion is what we need to do -- being addicted,  
 6 being addicted to nuclear weapons is not an excuse for  
 7 a jobs program.

49/07.01

8 What I really wanted to talk to you about,  
 9 though, was international treaties because that's my  
 10 main area of concern. Later this week I am going to be  
 11 at the United Nations in New York as part of the  
 12 Nuclear Non-proliferation Treaty and this is a  
 13 preparation -- preparatory committee that takes place  
 14 every -- right before the five-year reviews, which  
 15 there is one slated to take place in 2005. The NPT is  
 16 an international treaty and we are members of this  
 17 group. Somebody before said that we had pulled out.  
 18 That's not true. Since we are members, this is part of  
 19 US law as mandated under the US Constitution. One of  
 20 the NPT's main principals is that it be a step toward  
 21 the achievement of general and complete disarmament and  
 22 more particularly nuclear disarmament. Article six  
 23 requires each of its state parties to pursue  
 24 negotiations in good faith on effective measures  
 25 relating to the cessation of the nuclear arms race at

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1 an early date and to nuclear disarmament. That is  
2 international law. Rather than comply with our legal  
3 responsibilities the National Nuclear Security Agency's  
4 processed activities at the Lab according to this EIS  
5 break both the spirit and the letter of the law.

6 I lost my place. How can we expect other  
7 countries to refrain from developing nuclear weapons  
8 when our actions show that we disregard this law and  
9 yesterday the NPT conference began and there is  
10 statements of various countries, opening statements. I  
11 would like to read some of what the Canadian  
12 representative said.

13 He reminded delegates that you cannot expect  
14 some countries to have nuclear weapons without  
15 expecting that other countries will attempt to acquire  
16 them and specifically said we should seek to reduce the  
17 political or military value as ascribed to military  
18 weapons in order to facilitate their elimination.

19 The recent emergence of new nuclear weapons  
20 states proves this point that proliferation is actually  
21 encouraged by our stance. How can the Lab -- well, I  
22 won't go in to it because other people have said what  
23 the lab is going to do doubling this and tripling that.

24 The Lab wants to develop the ability to  
25 conduct full scale nuclear tests? Weren't we told that

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cont.

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07.02

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1 the NIF would eliminate the need for testing? The  
2 summary's purpose and needs states that the continued  
3 operation of LLNL is critical to the stockpile  
4 Stewardship program and to preventing the spread and  
5 use of nuclear weapons world wide and that the emphasis  
6 of the US nuclear weapons program has shifted from  
7 developing and producing new weapons designs to  
8 dismantling obsolete weapons and maintaining a smaller  
9 weapons stockpile. This is just not true.

10 What is not stated is that the development of  
11 smaller but more powerful weapons such as mini nukes is  
12 envisioned and each of those is more powerful than the  
13 bombs we dropped on Hiroshima and Nagasaki 50 years  
14 ago.

15 MR. BROWN: If you can wrap up in a minute or  
16 so, thanks.

17 MS. OLIN: Okay. As we said, other countries  
18 are not going to stand idly by while we do this.

19 I would like to propose to the Lab that they  
20 consider a fourth option, which is called reduced  
21 operations leading to dismantling of the nuclear  
22 weapons facility.

23 I would also like to quote some other  
24 countries. This is what New Zealand, the New Zealand  
25 representative said at the NPT conference yesterday.

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cont.

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1 Permitting nuclear weapons programs to continue over  
2 long periods of time fosters a permissive environment  
3 for the proliferates. More leadership from the nuclear  
4 weapons states in reducing their nuclear arsenals in  
5 demonstrating compliance under the nuclear disarmament  
6 pillar of the NPT would strengthen their moral  
7 authority and put pressure on states like India, Israel  
8 and Pakistan to do likewise and in closing I just want  
9 to quote the ambassador from Algeria who said in French  
10 but I'll say it in English. My delegation rests firmly  
11 convinced that nuclear disarmament remains the only way  
12 to save humanity from annihilation. I have written  
13 comments that I am submitting as well.

53/01.01

14 MR. BROWN: Fran Rachel and she will be  
15 followed by Jeff Gould.

16 MS. RACHEL: This is my sign. I carried it to  
17 Washington -- many, many places -- in the Vietnam war.  
18 It's been through a couple of wars already. I want to  
19 speak into the mic.

20 I want to put up this sign because, you know,  
21 it is kind of a magic sign, because people look at it  
22 and all kinds of people love it -- cops come to me and  
23 they smile. People in -- when I march in a line, when  
24 I march in a picket line, mothers poke their kids and  
25 say, "Look, a grandmother for peace," like grandmothers

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1 were something amazing. They are not. They are all  
2 over the world. They are all over the world. And I  
3 speak here that the speakers here have been wonderful I  
4 have learned so much and everybody here I think has  
5 learned a lot. So I don't have to repeat or try to  
6 repeat what other people have said. So I'm gonna be  
7 short. I just want to say my father died of cancer.  
8 My brother died of cancer and it is not hereditary, the  
9 doctors said no, it isn't. My sister also died of  
10 cancer. Women I know -- I know a lot of women by  
11 now -- about eight out of every ten women has had  
12 breast cancer and younger and younger women are getting  
13 breast cancer and children are dying of cancer. What  
14 the hell are we waiting for? How far does it have to  
15 go?

16 This is insane. This whole discussion is  
17 insane. It is not only insane, it is foolish and  
18 idiotic. I mean, grow up, we have got to grow up.  
19 We're on the side of life. We want to live. We want  
20 our children to live. We want children all over the  
21 world to live. What are we talking about? How much,  
22 how much killing stuff can we make? How much possible  
23 killing stuff is it okay to use? None of it, none of  
24 it.

25 And, you know, I understand people want their

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1 jobs. Everybody I know wants a job. People want their  
2 jobs, but there are so many jobs. I live in  
3 California. We don't have schools. Our schools --  
4 schools are closing because they don't have money to  
5 build their schools to improve their -- we don't have  
6 money for hospitals. We don't have money for anything  
7 to improve life. All we seem to have money for is to  
8 put people in jail and to kill them. So it is idiotic  
9 so let's stop it.

10 So I make a proposition that I want all of  
11 you, you scientists and all of you working hard, keep  
12 your job, change the purpose of the Lab to find ways to  
13 deal with all the stupidity and idiocy we have already  
14 had creating these death weapons. You don't want death  
15 weapons for your family. I don't want death weapons  
16 for my family so what are we doing? Stop it, just stop  
17 it. Okay. That is all I have to say.

18 MR. BROWN: Our next speaker is Jeff Gould and  
19 he will be followed by Tom Van de Brooke.

20 MR GOULD: My name is Jeff Gould. I live in  
21 Alameda. First I would like to thank the DOE for the  
22 opportunity to provide input on the proposed future  
23 projects at Lawrence Livermore Lab which I believe  
24 follow a path that is inappropriate for our  
25 civilization, the 50 mile radius environmental impact

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1 area and the planet as a whole.  
2 Today is a day like no other in history as I  
3 and many others must stand and object to new weapons,  
4 prototyping, test preparations and design at LLNL. At  
5 an early stage in my life the idea of submitting others  
6 to the wrath of a nuclear weapon turned me against the  
7 so-called deterrents of a cold war. Can one honestly  
8 claim that nuclear weapons are a rational means of  
9 providing security from violence and that their use in  
10 the biosphere can be limited?

11 The fact that we at the end of World War II as  
12 a nation were capable of such barbarism, such an  
13 instant final solution of our own sent the waves of  
14 proliferation to the shores of many nations. Today,  
15 ignoring recent strategic planning which gives  
16 legitimacy to the use of nuclear first strike leaves  
17 humanity again poised to become death or destroyer of  
18 worlds. Some may think the destroyer image must be our  
19 faith and we are here to shatter such shallow vision  
20 among individuals, tribes, and nations of the world.  
21 We are here as an expression of trust, honest  
22 communication and most importantly an understanding  
23 that we all continue to depend on each other. We are  
24 all connected.

25 I would like to quote President Dwight

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1 Eisenhower he said every gun that is made, every war  
2 ship launched, every rocket fired signifies in the  
3 final sense a theft from those who hunger and who are  
4 not fed, those who are cold and not clothed. This  
5 world in arms is not spending money alone. It is  
6 spending the sweat of its laborers, the genius of its  
7 scientists and the hopes of its children. This is not  
8 a way of life at all in any true sense. Under the  
9 clouds of war, it is humanity hanging on a cross of  
10 iron, close quote.

11 Fairness and human life are not valued more  
12 than commerce and smart bombs, military prowess or  
13 man's delusional path toward Armageddon. Fundamental  
14 questions specific to the employment of nuclear and  
15 biological weapons technology in our civilization must  
16 be honestly and openly addressed if we are to have a  
17 chance of ensuring a healthy future for the 7th  
18 generation yet unborn. Neither self-heat nor  
19 self-congratulation shall give meaning to the horizon,  
20 with civility and shared humanity we must stand.

21 In conclusion, with respect on sincerity, my  
22 message to those just doing their job drafting the  
23 Nuclear Posture Review and implementing its odious  
24 goals I quote the great American poet Alan. Insberg,  
25 "Go fuck yourself with your atom bomb."

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1 MR. BROWN: Tomi Van de Brooke and I think  
2 Dennis Thongs is next.

3 Ms. VAN de BROOKE: Good afternoon, my name is  
4 Tomi Van de Brooke and I represent the California  
5 Alliance For Jobs. The alliance is a labor management  
6 coalition representing over 1700 construction and more  
7 than 50,000 union workers in Northern California.

8 I am here today to support the proposed action  
9 and the adequacy and the thoroughness of the  
10 environmental impact statement. The proposed option  
11 will allow for the consolidation, modernization as well  
12 as decontaminating and decommissioning of the  
13 facilities at Lawrence Lab. The improvements to  
14 seismic safety, site security, mobility, they're all  
15 critical. In addition, the new facilities will enhance  
16 the long-term viability of the Lab and preserve the  
17 economic vitality it brings to our region and the  
18 security of our nation. For example, the construction  
19 of a new container security testing facility for  
20 evaluating terrorism threats will help to better secure  
21 our ports and to protect the integrity of international  
22 commerce. We are proud to host the Lab not only for  
23 the national security benefits but also for the skilled  
24 jobs and economic vitality it brings to the Bay Area,  
25 The region benefits from its 1.6 billion dollar budget

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1 infusion and from the over ten thousand jobs it  
2 provides at its facility. Similarly, the Bay Area with  
3 its vast human and technological assets and large  
4 skilled labor pool provides the Lab with both  
5 internationally recognized ingenuity and extensive well  
6 trained labor. The Lab is benefited from the skill and  
7 training of workers throughout this region. One  
8 example, The National Ignition Facility employed more  
9 than 400 skilled craft workers during the peak  
10 construction period. Lawrence Lab and its partners  
11 contribute significantly to the economic vitality and  
12 quality of life for the Bay Area and given its  
13 commitment to ensure that systems are in place to  
14 protect the public, workers and the environment, we  
15 endorse the proposals in the draft site-wide EIS and  
16 support the long term viability of Lawrence Livermore  
17 Lab. Thank you for the opportunity to speak.

56/04.01  
cont.

18 MR. BROWN: Thank you. Okay, Dennis will be  
19 followed by Ray Kidder.

20 MR. THOMAS: My name is Dennis Thomas and I am  
21 affiliated with Planet Earth and all its life and I  
22 want to say I looked at the draft statement on the  
23 internet and there is a lot of wonderful science or  
24 amazing science in terms of the high tech equipment;  
25 but, in terms of science credibility or scientific

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1 credibility, the document has none -- and why doesn't  
2 it have any credibility? Because it is not peer  
3 reviewed. We need a peer review of this document in  
4 terms of a non-governmental independent organization  
5 and today we have heard some peer review from the  
6 lawyers up in Washington, we heard what some of the  
7 peers have said about it, Marylia Kelley, and a few  
8 other speakers, the vast number of holes in the  
9 document and the vast lapses in it. So this needs to  
10 be peer reviewed to have any credibility. Right now it  
11 has none. It has to go back because us as tax payers  
12 who paid for this document, we want something that is  
13 worth something, to the just a piece of air.

57/31.03

14 And how can we tell it is not viable? Because  
15 in the past where we built nuclear weapons they are  
16 environmental disaster areas that shows the reality of  
17 your document, in terms of your numbers, they are all  
18 made up, because everywhere you see there has been  
19 thousands of times more radioactivity released into the  
20 environment. Rocky Flats there is cancer clusters all  
21 around Rocky Flats. Plutonium was released into the  
22 reservoirs, the animals around there were radioactive,  
23 the hares and the coyotes and it is still radioactive.  
24 Thousands of times of radioactivity was released and  
25 you know wherever you build this stuff it is going to

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1 be released. Look at Hanford they mentioned earlier.  
2 Millions of gallons of radioactive material. It was  
3 supposed to take ten thousand years for that to reach  
4 the Columbia River. It got there in 30. So your  
5 estimates and numbers are off by factors of probably a  
6 thousand, ten thousand. They need peer review.

57/31.03  
cont.

7 The other issue is in the documents of the  
8 Livermore Labs, one of its missions, is to stop  
9 proliferation. Guess what, building new plutonium pits  
10 is proliferation. We have double speak in the  
11 document. It needs to be peer reviewed, double speak.  
12 We want honesty as tax payers. We want to know what  
13 this thing is really going do. We don't need false  
14 reports and in proliferation China might start building  
15 weapons because they respond to this. So you have more  
16 nuclear material out there, the terrorists can more  
17 easily get a hold of it. So the whole idea of  
18 proliferation must be in reviewed in that document.

59/01.01

19 Finally, national security, that is the whole  
20 umbrella which brings this all up. We all want  
21 national security. I don't want to be killed by a  
22 terrorist. I don't want to be invaded by a foreign  
23 country. So that needs to be looked at in terms of:  
24 Is this going to prevent that or is it going to cause  
25 more problems than it solves because what we are doing

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1 is we are poisoning ourselves, Hanford, Rocky Flats,  
2 wherever, we are poisoning ourselves, we are poisoning  
3 land to save ourselves, so this is a contradiction.  
4 What are we saving? We are killing ourselves, we are  
5 poisoning ourselves to save ourselves, does this make  
6 sense? So there is the contradiction in the whole  
7 policy, the whole policy of what these weapons do needs  
8 to be looked at. Hopefully, a lawsuit will be brought  
9 to challenge the scientific credibility of the whole  
10 document, thank you.

11 MR. BROWN: Ray Kidder, Ray will be followed  
12 by Alan Sinclair.

13 MR. KIDDER: My name is ray Kidder. I am a  
14 long-term resident of Pleasanton, actually, although my  
15 first two years were in Livermore. I have lived in the  
16 Pleasanton area and the Livermore area since 1956. I  
17 also participated, this is almost unbelievable, and I  
18 am not that old, I participated in the Manhattan  
19 District Project in 1943, '43.

20 What I am particularly interested in is a  
21 fairly narrow topic and I beg indulgence from people  
22 who aren't quite as interested in this particularly  
23 narrow topic as I am, but I will make it quick.

24 In 1995 I was asked by the  
25 Department of Energy to participate in an external

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1 review of a report which the DOE had prepared and was  
2 in the process of preparing and the report dealt with  
3 the National Ignition Facility, the NIF, and the issue  
4 of non-proliferation and I have the copy of this old  
5 report here. There were a number of conclusions  
6 reached in this report which I emphasize: We were  
7 simply external reviewers. It is a DOE official  
8 report, not ours.

9 And one of the things I would like to read to  
10 you from this report, it is very short, just a sentence  
11 or two: It says, however, efforts to achieve ICF  
12 capsule ignition initial confinement fusion, ignition,  
13 that is the goal of the international, not just the  
14 Livermore Laboratory NIF program, the capsule ignition  
15 in turn at the NIF will not make use of any fissile  
16 material. Okay? Straight out.

17 While ideas for experiments at NIF using  
18 miniscule masses of fissile material could be  
19 conceived, such experiments could not be performed at  
20 the NIF without a physical upgrade to NIF which is  
21 described in a limited way in this EIS: but, the  
22 important statement is: Without, that is to say, it  
23 could not be performed at the NIF without a physical  
24 upgrade to NIF and further National Environmental  
25 Policy Act NEPA process. And there is currently no

60/01.01,  
26.01

1 intention on the part of the department to pursue these  
2 experiments. Something's changed, hasn't it?

3 So, the question is, what do?

4 Well, what I am proposing to do, and I haven't  
5 made any firm decisions yet, because I need to talk to  
6 some of my colleagues about it; but, I am proposing  
7 that this review which I participated in in 1995 is in  
8 need today of an update to look at the changes that  
9 have been made in the proposals as to what the NIF was  
10 going to do.

11 MR. BROWN: You have a minute left.

12 MR. KIDDER: A minute left. So I will leave  
13 you with that and I intend within the next, I think the  
14 period for a written input is something like four  
15 weeks; is that correct?

16 MR. GRIM: Until May 27th.

17 MR. BROWN: May 27th.

18 MR. KIDDER: I will send a formal proposal to  
19 the Department of Energy requesting that this update  
20 that I've just described of this report not only be  
21 done but be made a part of the current EIS document.  
22 Thank you very much.

23 MR. BROWN: Thank you. Okay, Alan Sinclair.  
24 Alan will be followed by Armin Wright.

25 MR. SINCLAIR: I am here because I am

60/01.01,  
26.01  
cont.

60/01.01,  
26.01  
cont.

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1 appalled. It is unbelievable to me that people can --  
2 the same people can imagine there is any good in these  
3 plans. I haven't read the plans yet. They are  
4 probably really good plans. They are probably really  
5 drawn out. I am sure the plans for Treblinka were  
6 really well drawn out. I am sure they were a benefit  
7 to the community that built them, but there are things  
8 that are wrong. These things shouldn't happen.

9 The US already has thousands of nuclear  
10 weapons, enough to wipe us all out. When the USSR was  
11 a threat, the excuse was that it was a deterrent.  
12 Mutually assured destruction, mad. Well, it is still  
13 mad. There is no excuse now, that is the difference.  
14 You can't make the world safer by developing nuclear  
15 weapons, they add to the risks. There are obvious  
16 risks and hidden risks, the obvious risks you already  
17 know. The hidden ones are an ever more toxic  
18 environment and permanent damage to our children.  
19 There is no excuse for this.

20 Radiation toxicity levels in Livermore homes  
21 have been rising for decades and now the Department of  
22 Energy wants to increase the nuclear activity. Not  
23 only that there are plans to base weapons in space  
24 hurtling around the earth, our mother, all the time.  
25 Space is free of weapons now but later this year the

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1 administration will begin launching armed satellites.  
2 We must stop this. There is still time to stop it.  
3 The preservation of space act, HR 3657 prohibits  
4 putting weapons in space. Push your representatives to  
5 pass the bill. Preservation of space act provides for  
6 international treaties to ban space weapons. We are  
7 working to get 20 countries to sign the treaties. It  
8 is not too late but we have to act now.

9 Turn your swords into plow shares. Work to  
10 solve the world problems not to increase them. Convert  
11 the Lab to civilian research and thank you for the  
12 opportunity to speak.

13 MR. BROWN: Armin Wright to be followed by  
14 Stella Goodpasture.

15 MR. WRIGHT: I would like to share a  
16 definition from Blackiston's Pocket Medical Dictionary.  
17 Insanity, I will leave out the more clinical parts, but  
18 item B is: A mental disorder of such severity that the  
19 person cannot distinguish right from wrong and B is  
20 dangerous to himself and others. I think what we're  
21 discussing here is a program that's been -- that flows  
22 from the brilliant analysis of an appointed President  
23 not informed by any reading except for the Bible,  
24 probably the classic comics version and also he has  
25 produced the brilliant analysis that is leading to the

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1 destruction of cities halfway around the globe which we  
 2 saw on the TV as we walked in and out of the room  
 3 today.

4 I submit that this definition also applies to  
 5 the functionaries that we see here whose career goals  
 6 override the moral compass and their common sense.  
 7 They are bright people. They have 20 years, probably,  
 8 of development of a career and it's frightening to  
 9 consider a leap to a new career to changing what they  
 10 have built but I think it is time that that should be  
 11 done.

12 Another definition of insanity that I have  
 13 heard refers to the ability of a person to hold firmly  
 14 to two completely contradictory concepts. Attacking a  
 15 country because it sought WMD's based on lies, by the  
 16 way, and simultaneously proposing ramping up our own  
 17 production of WMD's is insane.

18 Another item, the NNSA, AEC, the Energy  
 19 Department are chronic liars regarding the impact of  
 20 nuclear programs on public health and the environment,  
 21 a number of lies which are documented in a book by  
 22 Robert Dell Tradichi (Phon), At Work In The Fields Of  
 23 The Bomb. Only fools would believe NNSA today knowing  
 24 that their 60 years history of lying about all aspects  
 25 of our nuclear program. The term nuclear stockpile

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1 Stewardship is itself a lie and a cover for R&D of new  
 2 weapons of mass destruction. That's been going on and  
 3 we know that. I am reminded of the Peanuts cartoon  
 4 where Lucy keeps snatching the football away and these  
 5 people expect us to continue running and trying to kick  
 6 that football.

7 Regarding the Chamber of Commerce, the jobs  
 8 agency and the building trades unions, I am sure the  
 9 same groups in Germany could evade that argument for  
 10 building out Dachau and the ovens. Economic arguments  
 11 are insane in the context of weapons of mass  
 12 destruction. Thank you.

13 MR. BROWN: Stella Goodpasture and the  
 14 Reverend Don McKinnon will follow.

15 MS. GOODPASTURE: I am Stella Goodpasture and  
 16 for myself I will say that as a teacher of many years I  
 17 chose to concentrate on the nuclear arms race in the  
 18 early '80's. When I learned about what was being  
 19 plotted in secret for use in our nuclear arsenals, I am  
 20 telling you it was very dreadful because I thought  
 21 about these children sitting in front of me and I  
 22 thought: They don't know. I have to go and work to  
 23 stop this. And so we did. And in trying, you know, in  
 24 1982, the freeze movement went to Washington DC, I am  
 25 sure some of you were there. And at that particular

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cont.

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1 time we had a very good activist who was -- wanted to  
 2 connect us with the embassies. At that time we went to  
 3 the Israel embassy also, but they didn't want us all,  
 4 they wanted two. So I happened to be one of the ones  
 5 that went to the fourth floor and no one else around  
 6 and to talk about these 200 nuclear weapons. There was  
 7 no denial. I guess you all know that yesterday  
 8 Mordecai Vanunu was released from prison after 18  
 9 years, 11-and-a-half of those in solitary confinement  
 10 because he told the truth to his own people of what was  
 11 happening. Now I am wondering how many of our people  
 12 in this country know the truth about what is happening?

13 Well, I also speak as a Dominican Sister of  
 14 Mission San Jose and we made a corporate stance, that  
 15 means everyone in the congregation considers quite  
 16 carefully what this means and then we are supposed to  
 17 act according to it. We have made a corporate stance  
 18 and I will read it. As Dominican Sisters of Mission  
 19 San Jose we are committed a stance of non-violence and  
 20 peace. We hold a vision which reverences and affirms  
 21 the dignity of each person and seeks to bring the  
 22 gospel to bear with depth and compassion on the  
 23 critical issues of our times. There is no more  
 24 critical issues today affecting the peace and welfare  
 25 of the whole human family than that of the impending

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1 attack on Iraq by the United States and it's already  
 2 been called to attention that that was based on lies  
 3 and there is no weapon of mass destruction.

4 I will also go on to say that not only with  
 5 words but with deeds. A year ago in September, last  
 6 September Dominicans were fasting in New York on water  
 7 for a month and there were responses from Dominicans in  
 8 about 34 nations, praying with them and certainly in  
 9 alignment with their thinking that there has got to be  
 10 a better way. I mean, we are beyond this, we are  
 11 beyond this war, and our major Superior just had a  
 12 conversation and with her a couple of nights ago she  
 13 reported she was speaking to a major military officer  
 14 and he in conversation said: Well, we have got to be  
 15 beyond war. She asked him what he thought were the war  
 16 in Iraq. He said, we have got to be beyond war.

17 So there are not only religious people  
 18 thinking this way but many.

19 I will just mention, oh, and I didn't bring  
 20 the picture up of our three sisters who are in federal  
 21 prison today, Carol Gilbert 54, Jackie Hudson 67, Ann  
 22 Montgomery, RCSC 75 and Ardith Platt 66.

23 Now these sisters are in federal prison  
 24 because they tried to obey the President who called for  
 25 the destruction of weapons of mass destruction, so they

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1 did do this in Colorado and they had their inspection  
2 suits on and they risked 20 years in prison to do this.  
3 Now you can be sure they prayed and thought about this  
4 for a full year. They are still in prison and I would  
5 just like to read a little bit from a letter, there are  
6 pictures here, but I always take it to demonstrations,  
7 this is the one in Victorville.

8 Thanks be to God there are so many folks like  
9 you who are able and willing to face reality and to  
10 work for change before the whole system collapses. We  
11 must not be taken in by W's new plan called ownership  
12 society. This is based heavily on individual savings .  
13 How many of the poor have any savings? Meanwhile  
14 Congress has provided over six billion for research,  
15 expansion and upgrades in our country's nuclear  
16 capabilities. The administration succeeded in pushing  
17 through the repeal of the law banning the development  
18 of a smaller more usable low yield warhead. Congress  
19 provided funding for study of a new bunker buster  
20 warhead and so on and so forth.

21 But I just want to say: Yes, of this, in the  
22 year, the same year that the US votes in the union were  
23 against bringing the CTBT into force, yes 173; no, one  
24 the US. Two, compliance with the NPT, Nuclear  
25 Non-proliferation Treaty called for a total elimination

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1 of nuclear weapons, yes 164; no, two. Abstentions, 14.  
2 Three, compliance with the 2000 NPT program  
3 which includes missile defenses, weaponization of space  
4 and reduction of non-strategic weapons, yes 128, no 6  
5 US plus, abstentions 41. We all know -- it goes on  
6 like this --

7 MR. BROWN: If you can summarize.

8 MS. GOODPASTURE: I want to call attention  
9 that there is another organization I would like to  
10 bring the reality of their existence here it's The  
11 International Conference on Terrorism in a Globalized  
12 World and there was a mention of terrorism today. One  
13 statement perhaps two I will select. Encouraged by the  
14 US doctrine of preemptive strikes, Israel has bombed  
15 Syria on the pretext of self-defense inflicting further  
16 violence. This is State terrorism. We condemn State  
17 terrorism in all forms and so on. The urgency of the  
18 threat to life calls us to be creative. And I will end  
19 with this: Concerted and organized response to  
20 rediscover peace. We challenge the churches, religious  
21 bodies and our partners to join us in the furthering of  
22 ecumenical, interfaith and multi-religious coalition of  
23 people's movements and other groups. The people's  
24 forum for a global peace for life. A space for  
25 cultural and spiritual resistance for hearing the

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cont.

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1 stories of those pressed down by militarized  
 2 globalization. And for articulating people's visions  
 3 and common actions for a just peace in the face of US  
 4 unilateralism and the quest for global domination.

5 MR. BROWN: Thank you. Reverend Don McKinnon.

6 SPEAKER: Don is not here. I will submit his  
 7 statements unless someone wishes to read it.

8 MR. BROWN: That will be fine. We will be  
 9 glad to take that. Is it Carmen Hartono? And Carmen  
 10 will be followed by Paul Rea.

11 MS. HARTONO: Good afternoon. I am here for  
 12 my aunt who is a physics professor at Einstein  
 13 University in El Salvador. I am also here for my  
 14 husband who is a Viet Nam vet. I am also here for a  
 15 friend who once was a mathematician at NASA.

16 My friend thought she was developing a formula  
 17 for a rocket to go to Mars. A year later, she found  
 18 that she had developed develop the first ballistic  
 19 missile. She felt betrayed by her country and she  
 20 decided to leave NASA and she became a religious  
 21 sister.

22 My husband also felt betrayed when he was in  
 23 Viet Nam because that is where he learned that the US  
 24 had allowed Israeli jets to attack a US ship, a naval  
 25 ship right off of the Egyptian coast and the purpose,

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1 We think, is because at that time, Israel developed  
 2 nuclear weapons and this ship would have found that  
 3 out.

4 My aunt in El Salvador, she believes in  
 5 democracy and supports the FMLN which is a socialist  
 6 party in El Salvador. After Spain elected a socialist  
 7 candidate the US sent notice to El Salvador that they  
 8 must reelect the Bush supported candidate. With  
 9 memories of 70,000 people that were killed in  
 10 El Salvador, the last time El Salvador disagreed with  
 11 US foreign policy, the Salvadoran people decided to  
 12 elect the Bush supported candidate and El Salvador  
 13 remains in the coalition of the willing in Iraq.

14 Scientists in Germany were used for Nazi  
 15 atrocities. With total respect I ask government  
 16 employees to think how they are being used to support  
 17 an imperial power that is oppressing the world. Thank  
 18 you.

19 MR. BROWN: Paul will be followed by Steve  
 20 Gallagher.

21 MR. REA: Well, I would like to offer the  
 22 possibility of a little comic relief. I have been  
 23 moved to tears several times, but let me kind of  
 24 flashback 2000 years ago, the Chinese sage Confucius  
 25 pointed out that the beginnings of solutions to any

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1 problem lie with purifying the language.  
2           So I'd like to look at the layers of lies that  
3 we deal with and that have crept into much of our  
4 discourse this afternoon. So let's start with Orwell.  
5 Orwell, of course, gave us the concept of New speak.  
6 And you remember in 1984 we had everything nicely  
7 reversed that so war was called by the government peace  
8 and then during the Vietnam war we had saturation  
9 bombing by B52's and that was air activity, Walter  
10 Cronkite told us, just flying around active in the wild  
11 blue yonder there and so forth. Then a little more  
12 recently we have more air pollution called the clear  
13 skies initiative. Still more recently we have programs  
14 that degrade education called no child left behind.  
15 You are getting the idea here. It is sort of like do a  
16 180 on what you hear and maybe you will get at the  
17 truth.  
18           Now, of course then we have nuke speak, a  
19 specialized language that reflects the same principles  
20 of new speak and so we have the most deadly offensive  
21 weapons in the history of humanity called the peace  
22 maker missiles, isn't that sweet. Then we have  
23 airborne leaks are plumes, oh golly, just like a bird  
24 flying over head dropped a feather, only that might be  
25 purple iodine 131.

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1           Okay, and then we have leaks? No, we don't  
2 have leaks from nuclear facilities, we have unplanned  
3 emissions and accidents -- they never happen or once in  
4 a million years; but they are not accidents, of course,  
5 the press releases tell us that we have incidents or  
6 events and then, of course, testing nuclear bombs as  
7 someone just mentioned is nicely papered over with  
8 stockpile Stewardship and I love that phrase  
9 particularly and I find it, frankly, obscene, because  
10 Stewardship, if we were to open the Bible to the old  
11 testament, is the injunction that God gave to Adam and  
12 Eve to care for this planet and all of a sudden this  
13 religious term has been turned into the proliferation  
14 of a new generation of nuclear weapons all under the  
15 cover of religiosity. I could go on for quite a bit on  
16 the religiosity of nuclear weapons starting with the  
17 Trinity test, right? Uh-huh, yes. Man playing God.  
18           Then with a little more humor we come to the  
19 sexier versions of this and of course, Helen Caldicott  
20 has done a wonderful job with giving us member missile  
21 envy, but then, of course, Dr. Strangelove, pardon the  
22 pun, laid this out for us long before with premier Kiss  
23 off, General Buck Turgedson, remember? Merkin Muffly  
24 check your dictionary on those words and so forth --  
25 and of course with all the phallic symbols in there,

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1 the cigars, the missiles and then we had Slim Pickings  
 2 riding down the H-bombs with his hat and so forth with  
 3 the bomb as a huge phallus,  
 4 So we have this sexualization of nuclear  
 5 weapons as well, so they are not only religious, but  
 6 they are sexy as well.  
 7 Okay. On a little more somber note, I would  
 8 like to give a quote that may move me to tears again.  
 9 When Opie, Jay Robert Oppenheimer, the guy that brought  
 10 us nuclear weapons, the genius from Berkeley that went  
 11 to Los Alamos, looked through the deep dark glass and  
 12 saw the first atom bomb go off, Opie pulled back,  
 13 crumbled down behind the sandbags and so forth and  
 14 muttered, quoting the Sandscript which he had studied,  
 15 I have become death, destroyer of millions. That is  
 16 the founder of the nuclear movement right there when he  
 17 realized what happened. Afterwards, numerous other  
 18 people in a Manhattan project wrote to Truman pleading,  
 19 88 of the Manhattan scientists wrote pleading with  
 20 Truman saying, you know, if you have to show this  
 21 weapon, blow it off in Tokyo harbor to show the  
 22 Japanese, they will see the power of this and they will  
 23 surrender, but of course governments and politicians  
 24 got a hold of this, intoxicated by the God-like power  
 25 of the bomb and you know the rest of the story.

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1 MR. BROWN: Sorry, you are at your five minute  
 2 limit, if you can wrap up.  
 3 MR. BAE: Thank you. And then later on many  
 4 of these same physicists, the geniuses that put their  
 5 skills to work said: We physicists have known sin, and  
 6 I invite people to ponder knowing sin, thank you.  
 7 MR. BROWN: Steve Gallagher and Carl Anderson  
 8 will follow.  
 9 MR. GALLAGHER: Hello, my name is Steve  
 10 Gallagher from Santa Rosa. I am a -- I have been an  
 11 advocate for people that have been sexually abused for  
 12 the last ten years by those in religious and  
 13 educational authority and I don't really feel like I  
 14 can add much. I mean everybody has said quite a lot of  
 15 wonderful stuff. One thing on the issue of jobs, I am  
 16 a carpenter and there is no excuse for placing profit  
 17 and money and economic gain ahead of spiritual and  
 18 moral values and I am appalled by that. I mean, they  
 19 are carving up Mars now, do you know what I mean? They  
 20 are carving up Mars. All of our problems today can be  
 21 traced to greed. They can all be traced to greed. You  
 22 know, I was gonna -- I was going to -- in theory I was  
 23 supposed to take a business class, a beginning business  
 24 class and one of the first founding principal in the  
 25 business, in business is this notion of rational self

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1 interest. What a lie. It's greed. It's greed.  
 2 Rational self interest is greed. It's condoned greed.  
 3 It is like, you know, leeches sucking on cows that,  
 4 like, take them to the brink of death but don't kill  
 5 them so they can keep sucking them. That is what our  
 6 government is doing to us. That is what our  
 7 multinational corporations are doing to us. It is  
 8 disgusting. Everything. I don't care if you look at  
 9 the Bible. I don't care if you look at the words of  
 10 Jesus, I don't care if you look at the Hindus, the  
 11 Buddhist, you look at animistic religions of indigenous  
 12 peoples, there is no excuse for what this country is  
 13 doing. We have become the red coats of the world. If  
 14 you look at -- if you look at -- look at our  
 15 Declaration of Independence. Everything -- they gave a  
 16 list of all the things that they were opposing the  
 17 British government about and we are now doing every one  
 18 of those to the rest of the world and ourselves and one  
 19 of the quotes was: When a prince, by his -- this is a  
 20 rough quote: A prince, when a prince by his every  
 21 action brands himself a tyrant he is no longer worthy  
 22 to be the ruler of a free people and that is what we  
 23 have degraded to. That is what we have degraded to.  
 24 And, you know, I think one telling thing that Jesus  
 25 said, he said if you have wronged your brother, you go

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1 to him with open arms and you admit what you have done  
 2 and you ask how you can make that right, and we don't  
 3 do that. We don't do that. Our government doesn't do  
 4 that. I am appalled -- everywhere that I go I see  
 5 flags on cars, I see proud to be an American. Proud of  
 6 what? You know? That is true, we dropped those bombs  
 7 on Japan. We didn't need to do that. We had  
 8 annihilated their Air Force. We had annihilated their  
 9 Navy. We had bombed their cities back into the stone  
 10 age and it was about showing Russia what we had, you  
 11 know. I know people with relatives, I know people that  
 12 are related to the people from Hiroshima Nagasaki and  
 13 it is appalling.

14 MR. BROWN: You've got one minute left.

15 MR. GALLACHER: I was shocked. I just  
 16 couldn't believe it when Bush, you know, when Bush  
 17 started breaking all these laws about the test ban  
 18 treaty and everything else and, you know, he's insane,  
 19 he's insane, this is all about money, this is all about  
 20 greed, this is all about power and he is evil and all  
 21 the men that are behind him are evil and Cheney is  
 22 evil. They are demonic. They are insane and this is  
 23 just deplorable. Thank you.

24 MR. BROWN: The next speaker is Carl Anderson.  
 25 We have a number of people left to speak and, again,

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1 let me remind you, this is your opportunity to comment  
2 on the content of the environmental impact statement,  
3 DOE is making a record of this. They are obliged to  
4 respond to your comments as they relate to the EIS, so  
5 Carl is up next and Ron Hoffman will follow.

6 MR. ANDERSON: Carl Anderson, Oakland,  
7 California. I will be modifying slightly my prepared  
8 statement. On the Bio Safety Level Three Facility.  
9 Under international law, offensive uses of biological  
10 warfare are completely prohibited. However, existing  
11 international law has been criticized by many including  
12 the current US administration who have pointed out that  
13 a rigorous on demand transparent inspection regime is  
14 necessary to have confidence that laboratories like the  
15 BSL-3 are not to be used in any way that might  
16 facilitate offensive use of biological warfare. There  
17 is an urgent problem with co-locating any advanced bio  
18 safety facility at the Livermore site as currently  
19 proposed. As stated on Page S1 quote: The primary  
20 purpose of continuing operation of LLNL is to provide  
21 support for the National Nuclear Security  
22 Administration's NNSA's nuclear weapons stockpile  
23 Stewardship missions, end quote, that is weapons of  
24 mass destruction. Further more LLNL is deeply involved  
25 in quote offensive strike systems, comma nuclear, and

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1 quote. That is from page S2. And ever since 1945  
2 offensive nuclear strike systems have been  
3 fundamentally conceived as a means of escalation of  
4 non-WMD war to nuclear war. These fundamental elements  
5 of LLNL's primary mission cannot be sustained without a  
6 rigorous program of security and confidentiality, that  
7 is, opaqueness. It is unlikely, in my opinion, that  
8 LLNL will conduct research in offensive uses of  
9 biological warfare, however, given the Laboratory's  
10 record in offensive uses of weapons of mass destruction  
11 other than biological and given the security  
12 requirements of a facility whose primary purpose is  
13 weapons of mass destruction I don't see how any  
14 objective observing can have full confidence in any  
15 inspection regime for anything like a BSL-3 facility if  
16 it is located at a site with the necessary opaqueness  
17 of LLNL. People, opaqueness and transparency are  
18 antonyms, antonyms. So a BSL-3 facility at Livermore  
19 will not be understood as certainly out of the  
20 offensive WMD business. This lack of confidence will  
21 significantly undermine biological warfare. The  
22 environmental consequences of biological war caused in  
23 significant part by location of BSL-3 facility at the  
24 Livermore site must therefore be part of a realistic  
25 site-wide environment impact statement.

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cont.

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1 Plutonium AVLIS, page S4 has a typographical  
2 error of course. Weapons grade plutonium is not in  
3 short supply. Some years back the National Academy of  
4 Sciences did a whole study on what to do with the  
5 surplus of PU 239. Its decay is so slow as to be truly  
6 negligible from a supply standpoint. I see no  
7 reasonable reason for production of weapons grade  
8 plutonium. Furthermore, as demonstrated at Rocky  
9 Flats, plutonium vapors are notoriously toxic and  
10 difficult to cleanup.

11 MR. BROWN: One minute left.

12 MR. GALLAGHER: Perhaps there are hopes that  
13 with plutonium of even higher isotopic purity than  
14 currently stockpiled nuclear weapons might be designed  
15 to give more hope for victory through nuclear  
16 escalation. Those hopes are utterly vain. As Ronald  
17 Reagan, of all people once said, quote: A nuclear war  
18 can never be one and must never be fought end quote,  
19 and McGeorge Bundy and others have pointed out perhaps  
20 he didn't mean what he said but that fact does not  
21 change the truth of what Reagan said.

22 Given these facts, I see no reason whatsoever  
23 for the acceptability of plutonium AVLIS. In scoping  
24 of the site-wide environmental impact statement AVLIS  
25 was not originally mentioned. Someone in DOE must have

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1 thought that such an idea could be hidden from view.  
2 Perhaps they realized at some level that an idea as  
3 fundamentally stupid as plutonium AVLIS would not  
4 withstand public scrutiny.

5 MR. BROWN: Thanks.

6 MR. HOFFMAN: My name is Ron Hoffman,  
7 H-o-f-f-m-a-n. Thanks for the opportunity to  
8 participate in the show this afternoon. I will touch  
9 on just a couple points. I think a lot has been pretty  
10 eloquently and movingly covered by a lot of my comrades  
11 here.

12 Just harken to the AVLIS thing. The prized  
13 plutonium -- I mean, I suppose if you all think that  
14 that is perfectly safe or that the increased use of  
15 tritium, which the Lab doesn't really have a sterling  
16 reputation on containing is cool, then I suppose it  
17 would be somewhat sanguine, if you were going to do it  
18 in your rec room, as long as you lived on IO or some  
19 place sufficiently far away, but what's going to be the  
20 end product of that? I mean, why? I mean, if we were  
21 to get lots of plutonium we could make pretty  
22 sophisticated bombs out of a little over two, three  
23 kilos. I think probably the answer is smarter, cuter,  
24 special purpose weapons and the sexier, cuter weapons  
25 there are, the more likely they are to be used because

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cont.

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1 this will say this is for some little specific purpose  
 2 it isn't really going to trigger a whole big response  
 3 thing.

4 Well, I would suggest under the doctrine of if  
 5 you build it, they will come, you know, if we build  
 6 these more sophisticated sexier, cuter weapons, they  
 7 are gonna be used and the pressure to use them is going  
 8 to be a lot more both within the scientific and  
 9 engineering community and certainly politically.

10 I want to address the jobs thing just a little  
 11 bit without making any moral statement about it, but if  
 12 you look at the numbers, as far as jobs created by the  
 13 weapons industry in particular, the nuclear weapons  
 14 industry, this is an enormously capital intensive  
 15 enterprise. You get much more bang for your buck  
 16 putting it into things that help produce goods and  
 17 services. And I am sure a lot of the people who work  
 18 at the Lab who are enormously talented and smart, and I  
 19 really admire their work, I really got off on a lot of  
 20 that high tech stuff, you know, I think it's great fun,  
 21 I love those toys, even if they are maybe a bit over  
 22 priced, okay, so --

23 But, you know, if the effort goes into making  
 24 the metaphorical better mouse trap, not that I have  
 25 anything against rodents per se, because I keep them in

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1 their place, you get more jobs, that kind of activity  
 2 produces more jobs.

3 I was going to say, I don't have any grand  
 4 kids yet, I am waiting for my son to do something about  
 5 that; but, I have a couple grand nieces and grand  
 6 nephews who live in this area and out of the area and I  
 7 really wonder what's going to happen to them and their  
 8 progeny.

9 MR. BROWN: One minute remaining.

10 MR HOFFMAN: Because what I see happening, and  
 11 what we are using our best and brightest people doing  
 12 is destroying ourselves. Human beings as a species are  
 13 very clever but we always aren't very wise and one gets  
 14 caught up in a particular employment track -- a lot of  
 15 those skills would be put to much better use. I thank  
 16 you for your time.

17 MR. BROWN: Thank you. We have to change tape  
 18 in the court reporter's stuff. We are going to take a  
 19 quick break. Norma Harrison and Margaret Bowman will  
 20 be next. We are going to take a quick break for the  
 21 court reporter.

22 (Short recess).

23 MR. BROWN: Norma Harrison.

24 MS. HARRISON: Thanks. I am not gonna say  
 25 much about the Lab, per se, just my -- I am here to

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1 oppose the continued behavior of the rulership to  
 2 create murderous weapons that will poison the universe 70/04.01  
 3 for longer than the universe is old regardless of the  
 4 lies told about how they are gonna make it safe.

5 The idea is we have murderers here in this  
 6 country who murder us and themselves and we send  
 7 murderers abroad and we call them poor young men who  
 8 don't have a job and we don't call them murderers and  
 9 they are murderers and they are murdering people and we  
 10 want to have responsibility where it belongs for these  
 11 terrible murders and tortures and torments that are  
 12 caused the people by these terrible practices.

13 So, what I want to talk a little bit about is  
 14 this is a micro operation, this is one of the many,  
 15 many things that results from terrible imperialist  
 16 governments. I will use short term language, but  
 17 anyway, and I work with a macro organization, I work  
 18 with The Peace and Freedom party so most of you know  
 19 now that I have told everybody about this and the idea  
 20 is we want to save the world for all of us to give us a  
 21 wonderful life. I don't believe in greed. I think  
 22 greed is something the church tells us about, you are  
 23 greedy and you are not greedy. Wanting a fulsome life  
 24 is not greedy. Marx explained it he said it you get  
 25 there first in this structure and you grab it first, if

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1 you get there first and grab it first and control it  
 2 first then you will make immense profit off of it and  
 3 that is what the nature of this system is this  
 4 individualistic grabatious kind of arrangement instead  
 5 of mutualistic.

6 It is very hard to do socialism, especially in  
 7 the face of the media that is owned by the owners who  
 8 do all this telling us about the failures of socialism.  
 9 Well, like other things that we need to reclaim that  
 10 are ours we want to reclaim our language, our language  
 11 have struggled together to give us all lovely lives.  
 12 We all want to do that. We are not permitted to. Our  
 13 taxes are not given to the creation of, you know,  
 14 somebody spoke of it to give us health care, to give us  
 15 housing, to give us the pleasures of life and when they  
 16 reduce taxes for the poor, as my paper that you might  
 17 have gotten tells you, the taxes don't go to pay for  
 18 our parks and our public services and our social  
 19 services and so the poor are taxed again, you know,  
 20 disproportionately and they are not even looking at  
 21 huge wealth and how that gets taxed.

22 And so I am encouraging you to vote peace and  
 23 freedom, to support socialism to struggle for socialism  
 24 how ever you do it in the fall if you vote for our  
 25 candidates and we are not only running a Presidential

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1 candidate we are running State senator and US senator,  
2 that keeps us on the ballot. If we raise two percent  
3 of the vote we stay on the ballot and the discussion is  
4 able to continue, the socialistic discussion. We do  
5 not expect to win justice at the ballot box. That is  
6 one of our platform clauses. We expect to continue to  
7 struggle on the streets and build grass roots struggle  
8 and enable us all to talk about what we want to do in  
9 order for us all to give us all these lovely lives we  
10 are all talking about. We deserve to life as well as  
11 the rich and the rich live with security, they live  
12 with comfort, they live with full access to the  
13 benefits and enjoyment of life. We are looking for the  
14 benefits and enjoyment of life for all of us in care of  
15 earth and the universe now, which we have begun to  
16 attack.

17 MR. BROWN: One minute left.

18 MS. HARRISON: Thank you. If you will realize  
19 that California will send a democratic elector to vote  
20 for Kerry, right, without question. So your third  
21 party vote is not -- will be with impunity. You don't  
22 have to worry and the friends tell you, well, you know,  
23 the answer to people when you vote for a third party  
24 and they say oh you caused the loss of the election,  
25 you say no the democrats caused it, the Republicans

1 caused it, the fact that they don't have good policy is  
2 why we chose third party because we care so  
3 desperately, thank you.

4 MR. BROWN: Thank you. Okay. Margaret Bowman  
5 who will be followed by Jane Maxwell.

6 MS. BOWMAN: I wish to speak in support of the  
7 curatorship option, particularly that area in which I  
8 support arms control and non-proliferation. I  
9 represent the ecology group of Saint John's Episcopal  
10 Church in Oakland and am a founding member of the  
11 Regional Episcopal Environmental Commission in San  
12 Francisco. We object to the national policy that  
13 supports the development of nuclear weaponry, the  
14 boomerang effect brings them around and back to haunt  
15 us. We hope you will consider this reflection a vision  
16 of what earth can be. Let me present the really big  
17 picture for the Department of Energy.

18 If the earth were only a few feet in diameter  
19 floating a few feet above a field somewhere, people  
20 would come from everywhere to marvel at it. People  
21 would walk around it, marveling at its big pools of  
22 water, its little pools and the water flowing between  
23 the pools. People would marvel at the bumps on it and  
24 the holes in it and they would marvel at the very thin  
25 layer of gas surrounding it and the water suspended in

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1 the gas. The people would marvel at the creatures  
2 walking around the surface of the ball and at the  
3 creatures in the water. The people would declare it as  
4 sacred because it was the only one and they would  
5 protect it so that it would not be hurt. The ball  
6 would be the greatest wonder known and people would  
7 come to pray to it, to be healed, to gain knowledge, to  
8 know beauty and to wonder how it could be. People  
9 would love it and defend it with their lives because  
10 they would somehow know that their lives, their own  
11 roundedness could be nothing without it. IF the earth  
12 were only a few feet in diameter.

13 Author unknown.

14 We ask you, the Department of Energy, to  
15 eliminate the escalation of nuclear weapon development  
16 at Lawrence Livermore Laboratory. For starters at this  
17 time, this request is accompanied by a prayer that our  
18 best and our brightest scientific minds will be able to  
19 work for human and environmental betterment in the  
20 future. Shut the nukes down. Thank you.

21 MR. BROWN: Jane Maxwell and Dirk Neyhart will  
22 follow.

23 MS. MAXWELL: Like most of us here, I am  
24 overwhelmed by the absurdity of the situation in which  
25 we find ourselves in which we as a nation have enough

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08.01  
cont.

1 Weapons of mass destruction to destroy the world many  
2 times over and yet, even though we are now indisputably  
3 the world's sole super power the government seems to  
4 want us not to be merely tens but hundred of thousands  
5 of times more powerful than other nations.

6 It is no wonder that non-Americans are fearful  
7 and resentful of our power, not of our freedoms, not of  
8 our wealth, but of our gargantuan powers of  
9 destruction. Of the five options in the comparison of  
10 five strategies prepared for Tri-Valley Cares I support  
11 the curatorship option. It is the most sane of the  
12 proposed options with which to confront an insane  
13 reality.

14 MR. BROWN: Dirk Neyhart. Dr. Henry Clark.  
15 And Dr. Clark will be followed by Hal Carlstad.

16 Dr. CLARK: Greetings. My name is Dr. Henry  
17 Clark. I am the executive director of the West County  
18 Toxics Coalition and Environment Justice in Richmond,  
19 California, a long-time anti-war peace activist. I am  
20 here to oppose the plan to increase plutonium and  
21 tritium use at the Lawrence Livermore Lab and I oppose  
22 the development of nuclear weapons of mass destruction  
23 at the Lawrence Livermore Lab.

24 As far as jobs is concerned. I am for jobs,  
25 but I am not for jobs at any cost. I am not for jobs

72/02.01

73/04.01

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1 at destroying the planet. If that's the case, if we  
2 were for jobs at any costs, then why not support the  
3 drug dealers in my community. They provide more jobs  
4 than the government than anyone else so it is not a  
5 matter of jobs at any cost. That is foolishness. How  
6 hypocritical it is to be waging war in Iraq, about  
7 weapons of mass destruction and here we are producing  
8 weapons of mass destruction and have a mass destruction  
9 program here and we are sending young men and women  
10 over there to be killed. This is nonsense, it's  
11 hypocritical and it should come to an end period.

12 We should be moving toward reducing and  
13 eliminating weapons of mass destruction and work  
14 towards disarmament and peace. We should have long  
15 been beating our swords into plowshares and spears into  
16 pruning hooks and study war no more. Let's globalize  
17 justice and not war and racism.

18 MR. BROWN: Hal Carlstad. I believe Ted Miles  
19 is next.

20 MR. CARLSTAD: Yeah. I am Hal Carlstad. I am  
21 part of the Unitarian Fellowship in Berkeley and a  
22 former middle school teacher and I had the opportunity  
23 to have the daughter of E.O. Lawrence in the first year  
24 I taught and I have noticed that she has wanted to get  
25 her name withdrawn from the name of the Lab. She is so

74/02.01

1 ashamed to have her name associated with a agency that  
2 is out for mass destruction that could result in the  
3 elimination of life as we know it. This is beyond  
4 ludicrous. This is crazy greed. I am ashamed of my  
5 government. I am ashamed of the agency that has lent  
6 themselves to destruction. They could do a lot of  
7 things out there to save the world in medical or clean  
8 energy or materials for housing. We don't need  
9 research on making bombs. We need research for peace  
10 and justice for all.

11 Now Mordecai Vanunu, I shook hands with him  
12 last Wednesday at 11:15 a.m. when he got out of prison.  
13 Totally resolute with his arms up in the air convinced  
14 that the government should not be in the business of  
15 war and nuclear weapons. He was resolute. He had  
16 mentioned the lies, the secrecy that went on in making  
17 the bombs and the conspiracy between the Israeli  
18 government and our government in making the bombs.  
19 Totally lied completely. This has got to end. This  
20 madness, it's almost like a nightmare that you -- you  
21 wake up, you say this can't really be true. I have to  
22 think of my grandchildren coming into a world where  
23 they are going to have more, and more and more bombs.  
24 It's unbelievable.

25 Now, Mordecai Venunu got out of prison but he

75/07.01

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1 served his full term and now he's restricted to talk to  
 2 the media. They want to keep the secrecy of all the  
 3 stuff that is going on in those labs.

4 I would wonder if they would even allow him,  
 5 when he gets off of so-called probation or parole,  
 6 whether our government would even allow him to come  
 7 here and speak to an agency like this. I have a hunch  
 8 our government would say no, we have got to keep this  
 9 all secret and quiet. I wonder if your agency would  
 10 invite him over here. He has wanted to come to  
 11 Berkeley and he is going to stay at my house and I am  
 12 going to -- the next time we have one of these things,  
 13 I am going to have him here. All right. Thank you.  
 14 This is a real man.

15 MR. BROWN: Thank you.

16 MR. BROWN: Mr. Miles. I have got Beverly  
 17 King next.

18 MR. MILES: Good afternoon or maybe it is  
 19 evening, I am not too sure which. I am Bill Miles, I  
 20 have been a resident of Livermore for 38 years. A  
 21 month ago I travelled with about ten other Tri-Valley  
 22 Cares members back to Washington, D.C. for about three  
 23 days of talking to our Congressmen and their aides  
 24 about nuclear issues. Today, now, however, I would  
 25 like for us to focus our attention on DOE's projected

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1 activities and how they would affect our thinking --  
 2 how we see ourselves and others. As an analogy,  
 3 picture ten men in a circle, ten men who represent all  
 4 men everywhere. Each one has a different perspective  
 5 of life. Each one knows he's right. Let's give one  
 6 man, any man a rifle and wait. His whole countenance  
 7 rises. He becomes even more confident that he's right.  
 8 For himself and others, he decides it is time to get  
 9 people organized according to his own particular  
 10 plan -- obviously, the best way to do it. Alexander  
 11 the Great, Genghis Khan, Napoleon, Hitler, millions of  
 12 men with rifles have set out to improve the world  
 13 according to their plan. Those with a rifle embolden  
 14 to the cause -- their particular cause. The cause of  
 15 capitalism and democracy may not fit everyone  
 16 throughout the world. The English and we have been  
 17 struggling with democracy for 800 years. Women didn't  
 18 get to vote until 1920. Only half of eligible  
 19 Americans vote. Millions of Americans live without  
 20 adequate health care or education. Rather than being  
 21 out to save the world with our armies, perhaps we need  
 22 to save ourselves. The power of a rifle may not be the  
 23 most appropriate tool. Roman armies were always  
 24 marching, but Rome fell from within. Our annual  
 25 military expenditure is as much for the rest of the

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1 world combined. The mightier our military becomes the  
2 more confidence we have in being right and going it  
3 alone. The rights of others are increasingly ignored  
4 and increasingly they fight back, whether they be  
5 terrorists or allies who disagree. In 1970 we promised  
6 nonnuclear nations that in return for their not  
7 developing nuclear arms, we would not increase the  
8 power of ours. We have been increasing the power of  
9 ours.

10 We are a proud nation where being powerful is  
11 equivalent to being right. However, once a man has a  
12 rifle he doesn't give it up easily. My plea to you is  
13 that we not increase the power of our rifle or our  
14 righteousness. Let's set an example for non-nuclear  
15 nations by scaling down our own weapons systems. Let's  
16 not do research to design new pits for nuclear weapons.  
17 Let's not produce tritium targets for the NIF and thus  
18 new weapons systems. We need civilian science  
19 programs. Let's not do the diagnostics for renewed  
20 underground nuclear testing. Does might make right?  
21 Others may just be as right as we are. We are not  
22 perfect either. Please, no new designs for nuclear  
23 weapons. Thank you.

24 MR. BROWN: Beverly King to be followed by  
25 Marilyn Bardet or Bardet.

76/04.01,  
26.04

77/07.01

78/02.01

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1 MS. KING: I am Beverly King, a native of  
2 San Francisco. I've lived in this valley since 1966.  
3 My children and most of my grandchildren have been  
4 raised in this valley. My concern is not only for  
5 their health and welfare, but also for everyone else  
6 affected by what we do here. Because of my concern, I  
7 am volunteer with CARES. I am no scientist, no  
8 engineer, nor a lawyer; but, because of the gravity of  
9 what is proposed at the Lab, I'm learning.

10 As a native I have always had an amateur  
11 interest in earthquakes. My family was in  
12 San Francisco in 1906. I was in San Francisco in 1957,  
13 a 5.7 or so quake and know the noise and jolts of being  
14 on solid rocky land. I was here for the earthquakes of  
15 1980 and 1989 and know the sickening sway of alluvial  
16 soil.

17 Imagine placing a bowl of ice cream on the  
18 table and a bowl of jello. The ice cream represents  
19 solid ground, the jello alluvial soil. Then shake the  
20 table. The ice cream moves with the table. The jello  
21 slithers and quivers unpredictably. This valley is  
22 riddled with small fault lines, many of which are  
23 uncharted. The land beneath us is a mishmash of  
24 alluvial or Franciscan soil, confusing even to  
25 geologists. That's jello.

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1 The earthquake on the Greenville fault on  
2 January 24th, 1980, was 5.9. Damage to the Lab was  
3 10-and-a-half million dollars and six people there were  
4 injured.

5 Among the damages were broken gas and water  
6 lines and the displacement of mobile structures from  
7 their foundations. The Greenville fault lays 15  
8 kilometers from the Lab. The Las Positas fault lays  
9 one kilometer from the Lab and according to SWEIS, its  
10 hazards are poorly understood. The Calaveras runs  
11 along the foot of the hills to the west and farther to  
12 the west on the other side of the hills is the Hayward  
13 fault. On October 21st, 1868 a 7.0 earthquake killed  
14 30 people, destroyed much property, including the  
15 Mission San Jose and there were very few people in the  
16 East Bay and in this valley at that time. Both these  
17 fault lines have predictions of major quakes in the  
18 future. I won't even go into the infamous San Andreas.  
19 The fact is we live on alluvial soil in an earthquake  
20 prone area and that includes the Lab.

21 A month or two ago there was a very small  
22 swarm of tiny earthquakes. They did no damage. They  
23 are a reminder that we live in an active earthquake  
24 area.

25 MR. BROWN: One minute left.

79/14.01

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1 MS. KING: Now, the Lab is not noted for  
2 airing its problems in public. According to  
3 Dr. Currium of Santa Cruz, many by buildings are at  
4 risk including those where genetic modification of bio  
5 agents is conducted. I shudder considering these  
6 implications. I am going to rush this. Plutonium is  
7 being vaporized and I don't understand this, but I do  
8 know that you don't touch a hot stove. Radioactive  
9 materials used at the Lab are hazardous under the best  
10 of circumstances which do not exist at the Lab. Along  
11 with an earthquake they propose a catastrophe beyond  
12 imagining. Now, I am prepared to live under the  
13 natural hazard of earthquakes, I am not willing to  
14 increase the danger of earthquakes with the potential  
15 release of radioactive materials and bio agents.  
16 People would die unnecessarily and this beautiful  
17 valley could be unusable for generations. Not only is  
18 creating these dangers at the Lab wrong and immoral,  
19 but the dangers are multiplied by being in an  
20 earthquake area. My government owes its people better  
21 than this. You must reduce the amount of plutonium on  
22 site, not increase it. You must stop the development  
23 of new and modified nuclear weapons and work toward  
24 total nuclear disarmament. You must stop genetic  
25 modification and spraying of select bio warfare agents.

80/25.01

81/04.01

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1 For the welfare of those living in the valley, those  
2 potentially at risk in the area and the safety and  
3 welfare of the world, we must stop this madness. Thank  
4 you.

81/04.01  
cont.

5 MR. BROWN: Okay, thank you. Marilyn, are you  
6 here? Okay. And Frank Chambers will follow Marilyn.

7 MS. BARDET: My name is Marilyn Bardet and I  
8 am from Benicia. I have been for a very long time  
9 following the nuclear policy of the United States. I  
10 worked at the Institute for Defense and Disarmament  
11 studies in Cambridge volunteering for two years in the  
12 1980's. I have actively in my own town worked on  
13 environmental cleanups for eight years including one  
14 that is a military site cleanup. I started the  
15 restoration advisory board there for cleaning up the  
16 Bieneusi arsenal and it cost Ford motor subsidiary  
17 close to 13 million dollars to cleanup a less than 240  
18 acres to build 400 houses so you can imagine the costs  
19 of true cleanup when you are talking about protecting  
20 people's safety. I have followed that cleanup since  
21 1997.

22 I live in a 50 mile radius and in fact 38  
23 miles from Livermore, so I represent all the people in  
24 my town who couldn't be here today to talk about this  
25 lab and its destiny. I also believe that San Francisco

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1 that has adopted the precautionary principle ought to  
2 be respected and for its protection. I believe we all  
3 now live in a sacrifice zone that were talked about  
4 back in the '60's and '50's when our government's MAD  
5 policy would have allowed for ten million deaths in the  
6 United States in order for us to quote protect  
7 ourselves in the case of a strike by the Soviet Union,  
8 I would like to endorse and critique the analysis of  
9 Tri-Valley Cares whom I greatly and deeply respect  
10 especially Marylia Kelley and her devotion over the  
11 decades and also the work of the young people from the  
12 University of Washington. I think it is fabulous you  
13 came down to speak and I endorse and would incorporate  
14 your comments into my own.

15 I would like to just say historically I am  
16 also greatly interested in America's energy policy. I  
17 am now affiliated the Post Carbon Institute which is  
18 becoming an international clearing house for people  
19 interested in what we are going to face when we begin  
20 to be part of a post carbon future when oil depletion  
21 is the name of the game and right now in Washington,  
22 D.C. there is a conference going on between highest  
23 level government officials from Saudi Arabia and the  
24 United States and I am sure part of that discussion  
25 will have to do with Aramco's estimates of its global

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1 reserves and the Gauware reserve in Saudi Arabia. I  
2 believe DOE is poised here to talk not only about  
3 defense policy that supports 725 bases over seas, which  
4 is backed up by our lab, essentially, because we always  
5 threaten the nuclear threat as our ultimate weapon. We  
6 are here talking about defense policy, therefore, and  
7 this EIS would be incomplete if it didn't plot beyond  
8 ten years what this policy leads to when you are  
9 talking about developing future battlefield nuclear  
10 weapons and bunker busters of that sort.

82/31.02,  
02.01

11 Right now the debate is heating up about the  
12 quality of the estimates for global oil and natural gas  
13 reserves. You are going to be using more energy at  
14 this facility. Will you require the energy of another  
15 nuclear power plant. I know Dick Cheney's policy and  
16 Spencer Abraham's report which I have read on the DOE  
17 site calls for 94 coal plants across 36 states, nuclear  
18 power plants built all over the country and one of the  
19 things that I have been most focused on is the  
20 development of LNG facilities up and down the coast. I  
21 recently helped defeat the Bechtel/Shell project in  
22 Vallejo and I want you to be aware that for Livermore,  
23 you will have to be very concerned about energy in the  
24 future. We are talking about within this decade a huge  
25 change in shift and I believe what we are witnessing in

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1 this expansion at Livermore Lab is a kind of plan B  
2 desperate act to support policies that we in our right  
3 minds would never support in the future as we face post  
4 carbon world.

5 MR. BROWN: A little less than a minute left.

6 MS. BARDET: I would like to point to two  
7 books I would like to incorporate into my comments.  
8 One written by a friend of mine Robbie Nichols who  
9 worked with Roger Mulender when they developed the  
10 Start I Start II talks called, Who Will Stop The Bomb,  
11 a primer on nuclear proliferation written in 1985 and  
12 truthfully this is a book that -- question of what will  
13 happen when Pakistan gets the bomb. Well, the US  
14 military supported Pakistan CIA, Pakistan military. We  
15 know there was some connection with Dr. Cohn's ability  
16 to get those pieces and bits to make his bombs.

17 Another book that I want to incorporate into  
18 the record is Carol Gallagher's book written in 1993,  
19 American Ground Zero, The Secret Nuclear War which  
20 tells us about how the government lies to us. I can't  
21 really accept any EIS that does not incorporate the  
22 kinds of ways in which the American public was deceived  
23 during the nuclear test site program in Nevada and all  
24 of the things, the complicity of the government, not  
25 only that the great sins of omission by our government

83/02.01

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1 and not being honest with it people. These are the  
2 kinds of things that are deeply political obviously but  
3 you cannot pretend that what you are doing here and the  
4 expansion of this Lab is not deeply political. There  
5 is no such thing as Stewardship of nuclear weapons when  
6 you are talking about bringing more plutonium to this  
7 site, creating greater hazards to the entire Bay Area  
8 and it should be of great note in that this is not  
9 analyzed in the EIS and that your interests in only  
10 discussing the ramifications for five to ten years is  
11 greatly amiss.

83/02.01  
cont.

12 In context --

13 MR. BROWN: That should be it.

14 MS. BARDET: Yes, in context of the future  
15 that we are heading for on oil depleted future, thank  
16 you.

17 MR. BROWN: Okay, thank you.

18 Frank, you are next. Again, in consideration  
19 of the folks who remain to speak, if we can try and  
20 restrict our comments to five minutes or less. Cynthia  
21 Johnson will follow.

22 MR. CHAMBERS: I will be relatively brief  
23 since I spent a great time preparing for, delivering  
24 statements and working at the August 2002 meeting and  
25 in particular, let me just identify myself right off, I

84/31.02

1 am a 26 year-and-a-half employee of  
2 Lawrence Livermore National Laboratory working there  
3 today. One of the things, I will give you one quote  
4 from the presentation last August a year and half ago.  
5 Stockpile Stewardship is the new Y2K hoax. A real but  
6 relatively small problem blown up to attempt to justify  
7 the business as usual atmosphere at the LLNL.

8 Now, I have put a number of remarks in at that  
9 time. I thought that things would be covered and I  
10 would say please read my remarks from that meeting, but  
11 I don't know where they went. And in particular, I  
12 have to admit I did not read all 2103 pages of the  
13 document. I started to this morning to look for a very  
14 specific question which I raised and, in fact, I am out  
15 of order, because I have to go home now and I am going  
16 out with my wife, we have a nurse coming to take care  
17 of our handicapped son tonight, so I will be leaving,  
18 so thank you for taking me out of order.

19 And I am also -- a much more mundane question  
20 here. Specifically, I asked at the meeting in 2002 and  
21 then followed up with a letter, in which I made the  
22 following statements: It is my belief that there is a  
23 significant increase in the incidence of serious birth  
24 defects among the offspring of the employees of the  
25 Lawrence Livermore National Laboratory. Furthermore,

85/23.02

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1 the LLNL management is aware of this problem and  
 2 steadfastly refuses to study the issue.

3 I submitted those comments in a letter. I  
 4 made verbal comments. I now get your 2103 page report.  
 5 Comments also indicated -- this is on page S8, the  
 6 summary. That the LLNL SPEIS should evaluate the  
 7 increased levels of melanoma and birth defects in  
 8 Livermore, California. I specifically stated in the  
 9 employees of Livermore the employee -- children of  
 10 employees of Livermore, what happened here, and I won't  
 11 quote from the rest of the document, it appears in  
 12 several places, the question was taken as the children  
 13 in Livermore, not the children of lab employees. The  
 14 question was not addressed.

15 I will say another study found that birth  
 16 defect rates in Livermore are similar to the overall  
 17 rates in the State of California. I went to your  
 18 references. You have referenced the California  
 19 Department of Health Services, birth defects around  
 20 Livermore 1983, 1989. I have a cursory familiarization  
 21 with this study. My son was born in 1986. He is  
 22 severely handicapped. He cannot be here tonight  
 23 because among other things he can't talk; but, I asked:  
 24 Was he included in this study? No, because his defects  
 25 were not obvious at the time of his birth. Moreover,

85/23.02  
cont.

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1 this study was done specific to the -- 94550 based upon  
 2 ZIP codes, it was done to the 94550 ZIP code, not to  
 3 either children of laboratory employees, who would be  
 4 the most exposed of any group or to people who are in  
 5 close proximity of the laboratory -- we live about a  
 6 half mile from the laboratory at that time.

7 So what I am really here to do is to chide  
 8 you: What about my question? I received a phone call  
 9 some time last week, somebody very excited. They have  
 10 to answer this time.

11 What about last time? Are you going to deal  
 12 with this question? So that is really all I have to  
 13 say, I also do have to say, though, my son has become  
 14 very seriously ill in the last year. Things have  
 15 gotten considerably worse. I would ask you to pray for  
 16 him. If you believe in that, I don't know that I do  
 17 anymore. I would also say that I have made a real  
 18 effort to try to deal responsibly with this problem and  
 19 not go to a public forum, not go to sound bites. This  
 20 is a collection of papers, letters, documents of the  
 21 first two years of my trying to get this dealt with  
 22 responsibly by the laboratory and if I am angry and  
 23 bitter, it started ten years ago, it goes on today and  
 24 I challenge you in this document to, indeed, and I  
 25 quote from one of you guys, all comments will be

85/23.02  
cont.

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1 responded to in the final LLNL SW/SPEIS, I challenge 85/23.02  
 2 you to respond to this one. Thank you. cont.  
 3 MR. BROWN: Cynthia Johnson.  
 4 MS. JOHNSON: I am a very simple minded person  
 5 but I still just simply want to associate my voice with  
 6 all of those here today who spoke for life, like the  
 7 father who is concerned about his son. I mean, I think  
 8 we all know in the deepest part of our hearts and souls  
 9 that Livermore, Livermore is a death camp. It really,  
 10 really is. We will not -- we cannot go on living as we  
 11 are very long if even this expansion of the Lab goes  
 12 on. I definitely want to associate my voice with the  
 13 Tri-Valley Cares and the Western States Legal  
 14 Foundation. I am very, very grateful for those  
 15 organizations who do the hard work. I was with the  
 16 people in '82 and '83, the 500, the 1,000 who were  
 17 arrested here because it had always been a dream that  
 18 we have to stop, we have to stop Livermore. I mean, we  
 19 know that it is a death camp. I think people know it  
 20 in our -- in this, I never wanted to use the word  
 21 imperialism because I thought that was a word that  
 22 divided people, but now, now we know that this is a  
 23 country, an empire, and I am a citizen of this empire,  
 24 so I am just asking the people at the National Nuclear  
 25 Security Administration, and even as we look at those

1 words, we do not put our faith, there is no security in  
 2 nuclear whether it is a nuclear power plant or a  
 3 nuclear weapons lab that is going to be making more  
 4 weapons of mass destruction and I don't think it's  
 5 actually greed that is at the bottom. When I was in  
 6 Israel now to greet Mordecai Venunu who was in solitary  
 7 confinement for 12 years I stood next to a Israeli man  
 8 who held a sign in Hebrew and English and it said:  
 9 Stop the fear. They are telling citizens in our  
 10 society that we somehow need these weapons. No, we  
 11 need to abolish these weapons, then there is a chance 86/01.03  
 12 that this beautiful earth can go on.  
 13 I don't want to be negative and I don't doubt  
 14 anybody's sincerity or any individual. We are just one  
 15 six/billionth of this planet and we all just have to  
 16 look inside our hearts and know that we can go in a  
 17 different direction but we do need to go in a different  
 18 direction. I lived in Washington for 14 years. I was  
 19 co-director of an organization called Women's Strike  
 20 For Peace and they are an organization that started in  
 21 1960 when mothers who found out that the Strontium-90  
 22 in their milk would affect their children. President  
 23 Kennedy and his science advisor said it was those women  
 24 rising up that was responsible for the partial test  
 25 ban. Yeah. So we did something great in our lives.

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1 We started the partial test ban. The nuclear weapons  
 2 explosions in the air were causing tremendous cancers.  
 3 Then we got the partial test ban but now we  
 4 have moved back again, we are going in the wrong  
 5 direction. So all I am asking of course we can't have  
 6 an expansion of the Livermore weapons lab, we have to  
 7 have abolition. I support the plans of Tri-Valley  
 8 Cares which really follows these things, but we have to  
 9 turn around. We have to go in a different direction  
 10 and we can't, we have to remember that the world court,  
 11 which is part of the United Nations ruled, I was in the  
 12 Hague in 1995, listening to the countries of the world  
 13 all speak out against these weapons of mass destruction  
 14 and then the court actually ruled in July of, that was  
 15 '95 -- '96 that nuclear weapons are illegal. So I  
 16 don't even know why we are talking about these things.  
 17 I mean, it is very, very regressive. If someone like  
 18 Mordecai Venunu can be in jail for 18 years talking  
 19 about the secrecy -- here is the other thing about  
 20 nuclear weapons.

87/04.01

88/01.01

21 MR. BROWN: One minute left.

22 Ms. JOHNSON: One minute left. Nuclear  
 23 weapons make democracy impossible. That is what  
 24 Mordecai was talking about. We can't have a  
 25 democracy. There was someone else who referred to even

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1 using correct language. We can't have a democracy  
 2 because we know as the previous speaker said, those  
 3 weapons are what threatens the whole planet and that is  
 4 no future for anyone. So I think what I am just asking  
 5 is that everyone look in their hearts, we all have a  
 6 family we care about and we have to care about the  
 7 future and the planet earth and we know that this will  
 8 not happen and one final thing, I want to say yes to  
 9 life, love and laughter and no to war. At all of these  
 10 hearings, Father Bill came out and this is Father Bill  
 11 who would be with us if he could holding up his, his  
 12 belief in life and it is really quite, it is really  
 13 quite simple, if someone as simple as myself can  
 14 understand that we do not have a future unless we  
 15 change this and go in a different direction.

16 MR. BROWN: Thank you. Dean Coons and Valerie  
 17 George is next.

18 MR. COONS: My name is Dean Coons. And I  
 19 don't have a written statement but I will make it  
 20 short. I came because -- well, I'll identify myself a  
 21 little more. I live in Lafayette. I worked for 15  
 22 years in Pleasanton before I retired. Next month I  
 23 celebrate my 50-year membership in the American  
 24 Chemical Society. I am a chemist and I know many of  
 25 the scientific community that works at the Lab through

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1 American Chemical Society Association.  
 2 I thought that I probably could bring one  
 3 perspective to this meeting that could not be brought  
 4 by any other person in the room. I was wrong. A  
 5 couple of people who have spoken before have had  
 6 similar experiences and I agree with them entirely.  
 7 In 1948 I worked as a lab technician for the  
 8 Atomic Energy Commission at one of the national labs on  
 9 the university campus where I was going to school.  
 10 That was five years after the -- or only three years  
 11 after the dropping of the Hiroshima bomb. The people I  
 12 worked with were the people who refined the uranium  
 13 that went into the Hiroshima bomb. It was done on our  
 14 campus. It was then purified further and activated, so  
 15 to speak, at Oak Ridge; but, the original uranium that  
 16 went into the bomb was refined and what at what was  
 17 essentially a metallurgical lab that I worked at.  
 18 I have been an advocate of atomic energy from  
 19 the day I worked for them. I still think atomic energy  
 20 is useful and needs to be developed and needs to be  
 21 used, so I want to relate to you that perhaps there is  
 22 a bit of a knee jerk reaction in a non-scientific  
 23 community to the dangers of atomic energy and I was  
 24 exposed to radiation -- that was back in the days when  
 25 the Department of Energy didn't even exist. It was the

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1 Atomic Energy Commission, and believe me, the decisions  
 2 about atomic energy, I think, were better handled when  
 3 the scientific community was making the decisions  
 4 rather than the politicians.  
 5 I was exposed to radiation, accidentally; but,  
 6 you know, that all happened before I was 21 and by the  
 7 time I was 40 I had sired six children. They were all  
 8 perfect. No deformities. I have no fear of properly  
 9 handled atomic -- or nuclear and rare substances --  
 10 MR. BROWN: One minute left.  
 11 MR. COONS: All right. However, I think you  
 12 will find almost all of us who worked in those early  
 13 days with what was essentially nuclear research, my  
 14 project was to find help in finding a shielding  
 15 material for the atomic reactor that went into a  
 16 nuclear submarine. It could not be utilized in the  
 17 submarine until they found the proper shielding  
 18 material. It was eventually found and the development  
 19 became a reality. My team was not the one whose  
 20 project was chosen, however; Oak Ridge won out in that  
 21 battle.  
 22 I think you will find all of us who worked in  
 23 this in the early days are very, very, very antinuclear  
 24 weapon people. It is a miscarriage of the use of  
 25 nuclear science, it is definitely not the way to go.

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1 It should never be used. I respect the Lab. As a  
2 taxpayer I will very much support an investment of my  
3 tax money into the activities of the Livermore Lab as  
4 long as they are not connected with any kind of nuclear  
5 weapon.

6 MR. BROWN: Okay, thank you. Valerie George.  
7 Is Valerie George here? Okay.

8 We are actually within about 20 minutes of the  
9 next meeting starting and we are going to have to take  
10 a break until that meeting starts. We still have a  
11 number of people signed up to speak for this session  
12 and I guess, you know, what I would like to try and do,  
13 I know people have been here a long time, I don't know  
14 if we can work out any accommodation, but maybe we can  
15 ask -- let me just --

16 (Discussion off the record)

17 MR. BROWN: If I can ask those people who  
18 signed up to speak, we are going to take a break here,  
19 but those who are still here who have signed up to  
20 speak, if you can come up front, let me see if we can  
21 work something out to try -- dinner is a good idea but  
22 I want to find out what time constraints people have.  
23 So the proposal is that those who signed up to speak in  
24 the afternoon session and haven't spoken yet will have  
25 precedence for the evening session. So you all would

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1 go first; but, there may be some people who can't wait  
2 until that time and so if you are really under some  
3 time constraints, why don't you come up and we'll see  
4 what we can work out. Anyway. Sorry. We have to  
5 adjourn this session and we will be starting again, I  
6 guess, around 6:00 o'clock.

7 MR. GRIM: When we restart I will speed up my  
8 presentation as best I can. Okay?

9 MR. BROWN: So again, if you have any  
10 questions about the order and so on, come on up and we  
11 will adjourn this meeting, then. Thanks very much for  
12 your attendance.

13 (Whereupon the afternoon proceedings were  
14 concluded at 5:40 p.m.)

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1 STATE OF CALIFORNIA )  
2 ) ss.  
3 COUNTY OF ALAMEDA )  
4  
5  
6  
7  
8  
9

10 I hereby certify that the public hearing  
11 was taken at the time and place therein named; that the  
12 comments of the said speakers was reported by me, a  
13 duly Certified Shorthand Reporter and disinterested  
14 person, and was thereafter transcribed into typewriting  
15 under my direction.  
16  
17

18 WITNESS WHEREOF, I have  
19 hereunto subscribed my  
20 hand this 14th day of  
21 May, 2004  
22   
23 DENNIS M. SOUZA, CSR No. 3893  
24  
25

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1 LAWRENCE LIVERMORE NATIONAL LABORATORY  
 2 SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
 3 US DEPARTMENT OF ENERGY  
 4 National Nuclear Security Administration  
 5 ---ooo---

6  
 7 APRIL 27, 2004  
 8 EVENING PROCEEDINGS  
 9  
 10  
 11  
 12  
 13 LOCATION: Doubletree Club  
 14 720 Las Flores Road  
 15 Livermore, CA  
 16  
 17  
 18  
 19 Reported by: DENNIS M. SOUZA, CSR #3893  
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1 Livermore, California April 27, 2004  
 2 EVENING SESSION  
 3 MR. BROWN: So with that, we will get on with  
 4 the list of folks signed up. Dan Turner is next. Is  
 5 Dan still here? Okay. Following was Bob Hanson. Is  
 6 Bob here? These are folks who were signed up this  
 7 afternoon.  
 8 Scott Yundt? Is Scott here?  
 9 I think Bob Russell was running one of our  
 10 attendees home. He will be back. So when I see him  
 11 reenter, I will call his name again. Natalie Russell?  
 12 Amy Schults? Courtney Childs? Tim Gordon?  
 13 If any of those folks return, if you happen to  
 14 know them and see them come back in, let me know and I  
 15 will call their name again.  
 16 Martha, it looks like Priebat. Pat Buchanan?  
 17 JG Tindel? John Oldfather? Tony Debelis? Yvonne  
 18 Miles.  
 19 I think Donald King -- oh, good. Okay. You  
 20 are Donald King? Gayle Cuddy will follow if she is  
 21 here.  
 22 MR. KING: I am Donald King from Livermore. I  
 23 have lived here since 1978 when I came to work for the  
 24 Livermore Laboratory. I am not a scientist. I was a  
 25 compensation analyst in the Human Resources division

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1 and I worked there for four years. I was retired in  
2 1982. Just some preliminary remarks, sort of personal  
3 and not directly relevant to the environmental impact  
4 study but when I first came to work for the Lab not  
5 knowing much about what it did one of my co-workers  
6 handed me a book to start out with and he said read  
7 this. The title of the book was, We Almost Lost  
8 Detroit. It was about a nuclear melt down of a reactor  
9 in the area of Detroit. We didn't have to worry about  
10 that because as I learned as I was here a little while  
11 longer that the Lab did have a reactor here at one time  
12 and I suppose it could have melted down but that  
13 reactor was removed. I don't know exactly what year it  
14 was but it had to be prior to the year that I came in  
15 1978.

16 I should say just to get it on the record,  
17 that as far as these alternatives are concerned, the  
18 one that appeals to me most is the reduced option  
19 alternative because it is supposed to be a 30 percent  
20 scale down of the activities at the Lab and that's what  
21 I think should be happening, if we can't eliminate the  
22 nuclear weapons entirely, which I advocate, but I know  
23 that is pretty unrealistic.

24 In looking at the draft site-wide  
25 environmental impact statement here getting to the very

1/06.01

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1 last two pages, there was a section on accidents. It  
2 struck me and I had to laugh. It was the one about the  
3 possibility of a plane crashing into the Livermore Lab.  
4 Well, after having worked at the Lab for all those  
5 years, why I know that this was talked about every once  
6 in a while and there was air space over the Lab where  
7 pilots were to avoid, maybe it still is the case, I  
8 think it is, but for the scientists to calculate the  
9 annual frequency of an aircraft crashing into the  
10 building structure with subsequent gasoline pool fire  
11 is less frequent than once in a million years. Well,  
12 that is the kind of analysis that I think probably  
13 would be left just as well unsaid.

14 Now, what I have tried to do because I have a  
15 degree in urban planning so I like to sort of go by the  
16 rules on these environmental impact statements and I am  
17 quite familiar with the purpose of them so I have tried  
18 to go to particular pages of this, which I went through  
19 rather hurriedly. I saw that those who were analyzing  
20 what I could say could refer to what I am talking  
21 about. I started out with Page S4. This is regarding  
22 the number of -- the population surrounding the Lab  
23 here. I had to compute it because it said that 45  
24 percent of Lab employees reside in the Tri Valley area.  
25 I computed it out. It was something over 6,000 in

2/25.08

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1 total, but 40 percent or 10,600 I think times 45  
2 percent so we have about 4770 people living in the Tri  
3 Valley area, Livermore, Dublin, Pleasanton when you  
4 think of that. That is a lot people. That is a lot  
5 more people than were here when I came here in 1978. I  
6 did my masters project on the Livermore area recreation  
7 park district when it was founded back in the '30's  
8 when there was only about 3,000 here. In 1952 when the  
9 Lab was founded, of course, it was a relatively rural  
10 bastion out here 50 miles from the original lab of  
11 Berkeley.

12 MR. BROWN: You have got one minute left.

13 MR. KING: My goodness. A couple things that  
14 concerned me, Page S10 about the NIF and so we must  
15 presume that hazardous materials will be used when the  
16 NIF begins operating in 2008. That disturbs me because  
17 I think it was Ray Kidder a former scientist said back  
18 in '95 I think he said, that it stated a policy that  
19 fissile materials would never be used in that facility.  
20 The BSL 3 facility, Page S10 talks about, well, I  
21 believe we should be concerned about finding no  
22 significant impact dated December 16th, 19 -- 2002 was  
23 issued. No significant impact for that critical  
24 facility with these toxic substances and Page S11 about  
25 the Super Block, this is that critical area where there

3/26.01

4/35.01

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1 was the plutonium facility, tritium facility and the  
2 record of decision, the existing limit of 700 kilograms  
3 of they call it fuel, I assume that means weapons grade  
4 equivalent plutonium poses a constraint on future  
5 operations and there is disposition of pathway is not  
6 established for plutonium. So that they don't know  
7 exactly where this plutonium might go.

8 MR. BROWN: If you can cite maybe one more  
9 thing then perhaps turn in the other typed pages.

10 MR. KING: One other thing that bothered me  
11 somewhat, not the most important thing probably, but  
12 regarding the waste and isolation pilot plant. A  
13 contractor would operate this. There would be over  
14 1,000 drums of transuranic and mixed transuranic waste  
15 would go to this contractor, the WIPP, it was  
16 originally excluded from the NIF review. The survey  
17 does not state where the WIPP is located, how it will  
18 decontaminate or how it will contaminate or dispose of  
19 the waste, decontaminate or dispose of the waste, by  
20 what means will it be transported from LLNL to the WIPP  
21 facility, wherever that may be. I thought I would like  
22 to know that.

23 MR. BROWN: Fine. Thanks very much. Is Gayle  
24 Cuddy here? Gayle will be followed by Jonathan  
25 Stridling.

5/33.01

6/22.01

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1 MS Cuddy: Hello. My name is Gayle Cuddy. I  
 2 have lived in Livermore since 1988, after having lived  
 3 in Massachusetts and San Francisco before that. My  
 4 husband got a job in Fremont after we lived in  
 5 Massachusetts and when he told me he found a house in  
 6 Livermore I balked. I knew there was a famous  
 7 Livermore Lab there and I didn't want to live close to  
 8 a nuclear weapons lab for two reasons. I didn't  
 9 believe on its emphasis for weapons research rather  
 10 than research for peaceful purposes and it had a  
 11 reputation even in the '70's as a contaminated place.  
 12 But I was glad our house was on the most western edge  
 13 of town several miles from the Lab. I have worked for  
 14 Tri-Valley Cares now for three months however I have  
 15 been sympathetic for its work ever since I moved here.  
 16 Several things really scare me about living near the  
 17 Lab. Number one, since 9/11, the potential as a  
 18 terrorist target is chilling. Though I have not been  
 19 one to freak out over such things as flying in an  
 20 airplane or taking BART, there is enormous potential  
 21 for disaster to millions people should a terrorist  
 22 attack occur. This is corroborated by this morning's  
 23 article in the Tri Valley Herald from the LA times, to  
 24 quote: The General Accounting Office will report today  
 25 that the threat posed by terrorists against the US

7/30.01

1 weapons labs is estimated by intelligence agencies to  
 2 be far more lethal than what the Energy has accepted in  
 3 its most recent planning for security. The article  
 4 goes on to say that unlike other facilities the  
 5 Super Block at the Lab is tougher to defend. A crude  
 6 bomb built by suicide terrorists in minutes, to quote,  
 7 would destroy the Lab, the surrounding city, that is  
 8 Livermore, and cause tens of thousands of casualties,  
 9 the experts warned. A lesser although still lethal  
 10 threat would be a dirty bomb in which radioactive  
 11 materials would be released and disbursed into the air.  
 12 Think Chernobyl. Daniel Brian, Executive Director of  
 13 the Project On Government Oversight our Washington,  
 14 D.C. group that has been pressing the Energy Department  
 15 to improve its security states, to quote: We have  
 16 concluded working with insiders that Livermore cannot  
 17 adequately protect its materials. The only way to  
 18 address the problem is to get those materials out of  
 19 here.  
 20 Secondly, what else scares me about the Lab is  
 21 that it's built on an earthquake fault, there are  
 22 several as I understand, that in itself seems like a  
 23 good reason to remove the deadly materials from the  
 24 Lab.  
 25 Third, it also scares me that the US is

7/30.01  
cont.

8/14.01

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1 invading other countries looking for weapons of mass  
 2 destruction yet continuing to put billions of dollars  
 3 to build up our own weapons program here in the US. It  
 4 deeply concerns me the hatred that is building up  
 5 around the world toward us.

6 Therefore, I recommend that one the Lab be  
 7 converted to civilian peaceful research; two, the Lab  
 8 clean up the super fund site that it is; and three, be  
 9 a leader in global disarmament which the United States  
 10 is supposed to be committed to. Thank you.

11 MR. BROWN: Thank you. Is Jonathan here?  
 12 Okay, I think Eugene Spake. That actually concludes  
 13 the list of folks that had signed up --

14 SPEAKER: I had. It was out there.

15 MR. BROWN: Okay. Anybody else who had signed  
 16 up for this morning that hasn't had a chance to speak.  
 17 I see we have one. You are next.

18 MS. WILDWOOD: Hi, my name is Annie Wildwood  
 19 and I live in Sonoma County and I have two  
 20 grandchildren, a daughter and a son-in-law who live in  
 21 this area and his parents and family and so I thought I  
 22 should come today and say a few words. I'm gonna do  
 23 kind of a unusual juxtaposition of first of all I am  
 24 going to do something down beat and then I am going to  
 25 do something, hopefully, upbeat.

9/07.01

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1 I was a child on the island of Kwajalein in  
 2 the Marshall Islands. I was ten years old and it was  
 3 two years after the Bikini bomb test.

4 Since then, two of my sisters are dead. I  
 5 have had three sisters and a brother. They died young,  
 6 breast cancer, both sisters, one just last October. 35  
 7 years after I lived on Kwajalein Island I was in Canada  
 8 in Vancouver. I picked up a magazine from Kwajalein  
 9 islanders and read that the women there in the Marshall  
 10 Islands were having hamburger babies and that was 35  
 11 years after the first bomb was dropped on Bikini  
 12 Island.

13 So, I took up this work of going to hearings  
 14 and speaking out and also since it is kind of a  
 15 depressing thing, I am going to sort of do something to  
 16 cheer myself up and tell a little story that's relevant  
 17 here, I think.

18 So, well, hi. I finally got why President  
 19 Bush always says nuclear. I used to kind of feel sorry  
 20 for him that none of his speech writers or staff would  
 21 even clue him in about how to really pronounce it. I  
 22 used to think that, oh, he must be so embarrassed or he  
 23 would be so embarrassed if he found out that he had  
 24 been doing it all the time he has been in office saying  
 25 nuclear. Well, I was thinking about it the other day

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1 and I thought, oh, no, no, that's right. He's  
 2 pronouncing it just like he wants to, just like he  
 3 thinks it should be said. Nuclear. Nuclear. Silly.  
 4 me, thinking of him like that, but -- well, that is not  
 5 really why I am up here, though. Hum, silliness.  
 6 Well, that does have something to do with what I want  
 7 to talk about. I wanted to talk about the mind and the  
 8 imagination of the human species and the state of  
 9 denial as applied to nuclear and nuclear energy use.  
 10 So today I have one example of how silly the human mind  
 11 and imagination can get, recklessly silly. Some of you  
 12 might recognize this character here. Has anyone ever  
 13 seen this guy? Is there anyone here that knows who  
 14 this is? This is Pluto boy. Now, he was part of a  
 15 cartoon that the Japanese put out to convince the  
 16 people, they actually put out a little video cartoon  
 17 back in about, hum, at the time when Hazel O'Leary was  
 18 head of the Department of Energy, do you remember that,  
 19 about 1994, at least. Well, the Japanese people were  
 20 trying to convince the people who lived in a perfect  
 21 town where they were going to build a new plutonium run  
 22 reactor that, well, the dialogue went something like  
 23 this: Pluto boy had in this hand a glass which looked  
 24 like a glass of water offering it to his friend. And  
 25 Pluto boy said: Oh, plutonium's good. You can even

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1 drink it.  
 2 That actually happened. But Hazel O'Leary, do  
 3 you know what she did? She wrote them a letter and she  
 4 said: I think you're being disingenuous to these  
 5 citizens there who live around where this nuclear  
 6 reactor is going to be built. You should tell them  
 7 what is really going on there. Yea for Hazel O'Leary.  
 8 MR. BROWN: About a minute left.  
 9 MS. WILDWOOD: Okay. So I want to ask the  
 10 question of the Department of Energy today: If the  
 11 Draft Site Environmental Impact Statement for Continued  
 12 Operation of Lawrence Livermore National Laboratory and  
 13 Supplemental Stockpile Stewardship and Management  
 14 Programmatic Environmental Impact Statement is another  
 15 disingenuous case of trying to convince people it is  
 16 safe to drink, breathe and touch plutonium and anthrax,  
 17 plaque and other deadly bio warfare pathogens because  
 18 that's what could happen in the Bay Area to 7 million  
 19 people on these earthquake faults. Silly. Why can't  
 20 we just come together and stop making the poison fire?  
 21 That's not silly.  
 22 MR. BROWN: Let me move on to -- yes -- sir?  
 23 Had you signed up?  
 24 SPEAKER: There wasn't actually a sign up, but  
 25 I would --

10/25.05,  
04.01

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1 MR. BROWN: We have actually a sign up sheet.  
 2 If you would like to speak this evening, just see the  
 3 folks out at the desk and we will be glad to add you to  
 4 the list.

5 I want to move onto the folks who have signed  
 6 up in order for this evening's meeting. We'll start  
 7 with them. I want to mention that as I have been  
 8 doing, I will give everybody a warning at the one  
 9 minute mark so you can conclude your comments, if you  
 10 are running that long; and also, I will try and call  
 11 the name of the next speaker so that you know you are  
 12 coming up next and can move into position to get up to  
 13 the mic as soon as possible because we did run terribly  
 14 late this afternoon and I would like to try to move  
 15 this session along as rapidly as possible.

16 The people signed themselves in. As I  
 17 mentioned this afternoon, calligraphy doesn't appear to  
 18 be a strong point of the school system these days, so I  
 19 am going to have to guess at some of the last names,  
 20 but I hope you will forgive me for that.

21 So first we have, is it Buddy Akwich? Is  
 22 Buddy here? Good. Buddy will be followed by I guess  
 23 it is Eugene Spake. I think I called his name earlier.  
 24 Eugene, if you are here, you are welcome to speak,  
 25 otherwise I will move onto the next person. Buddy,

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1 welcome.

2 MR. AKACICH: Thank you. I am a local guy  
 3 now. I mean, I am living in San Ramon and I am just a  
 4 concerned citizen. What are we doing here? I mean,  
 5 what are we trying to achieve this evening? It seems  
 6 to me that what I would like to achieve is to tell you  
 7 (indicating), specifically, a bunch of things and after  
 8 I tell you those things you will change your mind about  
 9 everything you are doing and not do it anymore.

10 I think that the likelihood of that occurring  
 11 is close to zero. I hope I'm wrong. I really do.

12 You know as you made your presentation this  
 13 evening, it seems to me that you gave us one chunk of  
 14 bad news after another. It was one bummer after  
 15 another. You didn't say anything that I liked. You  
 16 didn't say anything that sounded good to me. Every  
 17 item that you clicked with your laser was a bummer and  
 18 then you went onto minimize it. Well, it sounds like a  
 19 bummer, but we have it under control, it won't really  
 20 be a bummer. It's a bummer.

21 Every nuclear weapon in the United States  
 22 arsenal was developed at Livermore or Los Alamos Lab.  
 23 Dangerous new nuclear operations are planned for the  
 24 next ten years. Are you going to tell me that they are  
 25 not dangerous. They are dangerous. They are toxic.

11/23.01

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1 They pollute. They kill, so you are going to tell me  
2 oh they only pollute a little bit and the likelihood  
3 they will kill is -- no, man, they pollute and they  
4 kill.

11/23.01  
cont.

5 I see you have a wedding ring and a shirt and  
6 a tie and it looks to me like you probably have a wife  
7 and children.

8 MR. GRIM: Two daughters.

9 MR. AKACICH: Cool. You want to look your  
10 daughters in the face and tell them about these 300 new  
11 nuclear bombs? Do you feel cool doing that? 450 new  
12 plutonium pits per year. I want to know how many of  
13 those plutonium pits are going to be in your backyard?

14 You are going to increase three fold the  
15 amount of plutonium? Environmental damage and nuclear  
16 proliferation risks, those are facts. They are not  
17 theoretical. They are not maybe. Those are facts.

12/33.01

18 When you went to college, did you take  
19 philosophy courses? Did you take courses in the  
20 philosophy of religion, morals, ethics? Did you take  
21 those courses in college?

22 Do you know about Helen Caldicott and what she  
23 says, Dr. Caldicott, the Australian physician, do you  
24 know what she talks about? Have you read the books she  
25 has written. And she talks about what you are going to

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1 do with those nuclear weapons is you are going to blow  
2 up Russian mountains because the Russians have 2500  
3 nuclear weapons pointed at us so you feel like you need  
4 to knock mountains down.

5 Pollution and death is what you are dealing  
6 with.

7 Another thing, I suspect that you're getting a  
8 pretty good paycheck and I suspect you are cashing in  
9 on Bush's tax cuts. And my greater suspicion is that  
10 if you found out that you could make double that money  
11 by growing organic apricots, you'd give it a thought.  
12 So it's all about this (indicating).

13 This whole thing seems absurd to me. It seems  
14 like, are you kidding me? Are you crazy?

15 MR. BROWN: One minute left.

16 MR. AKACICH: I just want to know about the  
17 bunker busters, the plutonium tipped bunker busters  
18 that our intelligent, educated, and thoughtful and well  
19 read President is talking about.

20 If you want to build these weapons because you  
21 want them to be mini nukes and you want them to be  
22 bunker busters, I want to know where those bunkers are.  
23 You know what, I don't think there are any. Show me.  
24 Show me scientific, solid empirical evidence that there  
25 are, fact, some bunkers around the world that I got to

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1 worry about. I believe it is a hoax and it's a myth.  
2 Thank you for the time.

3 MR. BROWN: Okay, thanks. I would like to  
4 remind people that the primary focus of this evening's  
5 meeting is the opportunity to make comments on the  
6 draft environmental impact statement. This is your  
7 opportunity to get on the record comments that the  
8 Department of Energy has to respond to and people are  
9 certainly free to make comments on a wide range of  
10 issues as they did this afternoon; but, I advise you  
11 not to forego the opportunity to get those comments on  
12 the record.

13 The other thing is that in terms of some of  
14 the more personal comments, people do feel the need, on  
15 occasion, to raise some issues of morality and so  
16 forth; but, you may be a little more successful in  
17 doing that not in such a public forum but, perhaps,  
18 engaging in a more private conversation.

19 The next person who signed up is Eugene Spake.  
20 Is Eugene here? Don King? Laura Shaw? Laura is here.  
21 Lucille Moyer will follow.

22 MS. SHAW: My name is Laura Shaw. I am a  
23 teacher in San Jose. I teach elementary school. I  
24 have three sons. I have a personal connection with a  
25 nuclear industry in that I was born in Grand Junction

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1 Colorado which is a town built on uranium slag. I lost  
2 both my parents to cancer before I left high school.  
3 California is an unpredictable state. We have  
4 earthquakes, energy blackouts, traffic jams and  
5 unpredictable people. Near the Lawrence Livermore Lab  
6 are two earthquake faults and as the Loma Prieta  
7 Northridge earthquakes proved you don't have to live  
8 directly on a fault to host an earthquake. Seismic  
9 unpredictability is the first reason we should not have  
10 anymore nuclear fuel here. Considering the size of the  
11 Lab, the soils and the water table involved, no amount  
12 of earthquake retrofitting is going to guarantee to  
13 protect the total facility.

13/14.01

14 We have energy blackouts here. Too many  
15 people, too many traffic jams, way too many people in  
16 the greater east Bay Area to subject them to a possible  
17 traffic accident transporting nuclear or biological  
18 materials upon our unpredictable freeways.

14/25.10

19 Finally, we have people, lots and lots of  
20 unpredictable people. As the article in today's  
21 San Jose Mercury News states, amid growing concern that  
22 nuclear weapon labs are vulnerable to the terrorist  
23 attacks, senior Energy Department officials are  
24 seriously considering major steps to improve security  
25 including the removal of plutonium and highly enriched

15/30.01

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1 uranium from Lawrence Livermore National Laboratory and  
2 other weapons sites.

15/30.01  
cont.

3 Now is not the time to consider adding anymore  
4 extremely highly risk materials to an already  
5 unpredictable and dubious state of security of this  
6 research facility. The environmental hazards of this  
7 new buildup of nuclear materials at this facility are  
8 huge and unacceptable to the unpredictable Bay Area.  
9 Thank you.

16/30.02

17/04.01

10 MR. BROWN: Ready, okay.

11 MS MOYER: My name is Lucille Moyer. I am  
12 from San Jose. I am the mother of a 19-year-old son,  
13 I have been very concerned about what Lawrence  
14 Livermore Lab represents to us for a long time.

15 My thoughts border on rage most of the time  
16 when I think about nuclear weapons and what we are  
17 doing in this country. But you said something just a  
18 minute ago that made me shake with rage and I want to  
19 tell you why, because you mentioned that we should be  
20 talking about these issues of morality and ethics  
21 privately and that we shouldn't mention these things in  
22 public -- that we should take the opportunity to  
23 respond to this proposal to this environmental impact  
24 statement and not talk about these issues that we're  
25 here to really talk about, because these are issues of

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1 US morality and of the American citizens and this is so  
2 important to us and I want to let you know that I and a  
3 lot of other people consider what you said to be -- to  
4 follow in the footsteps of George Bush to be dissent  
5 killing rhetoric and that's what you -- when we try to  
6 shame people and keep them from talking about what is  
7 in their heart and what they know to be true and honest  
8 and to keep what we do in this country secret and not  
9 talked about. In a dysfunctional family, you know what  
10 we do. People don't talk. They are not supposed to  
11 feel and that is dysfunction and that's our country  
12 right now.

13 So I want to, I just want to make you aware  
14 that that's how I received that and I am just shaking  
15 because I am sick of George Bush saying these things  
16 that if we dissent we are not patriotic and that is not  
17 true, because patriots, this room is filled with them  
18 and these are important issues about the future of our  
19 country.

20 Anyway what I want to say, thank you, that  
21 this entire discussion of the environmental impact of  
22 the Lawrence Livermore Nuclear Laboratory, this whole  
23 discussion is a weapon of mass distraction. We don't  
24 want anymore nuclear weapons. Neither we nor any other  
25 nation needs them. We don't need anymore nuclear waste

18/02.01

19/22.02

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1 in our communities. Past damage by Lawrence Livermore  
 2 Labs is horrible, at the very least questionable, and 20/23.01  
 3 your comment earlier, I guess I am going to say  
 4 something to you, your comment earlier just rang, just  
 5 kept repeating in my head: We have investigated many,  
 6 many accidents. That is all I had to hear. That  
 7 terrified me. I don't care if they are little, they 21/25.06  
 8 are big, they are accidents and the potential for  
 9 accidents is great.

10 But this discussion is more than about just  
 11 nuclear pollution and local damage. It is about the  
 12 way we think and the way we feel and how we act as a  
 13 nation and as individuals. To quote congressman Dennis  
 14 Kucinich, whom you all know, if we as a nation do not  
 15 go around the world taking as we please, killing as we  
 16 please and disrespecting others as we please, then we  
 17 shall never have need to fear any attack.

18 The current nuclear arms race is the direct  
 19 result of the world's well placed and justified fear of  
 20 the US capacity for violence and aggression. The US  
 21 has over the last 50 years or more interfered in  
 22 governments around the world supporting coups of  
 23 leaders, most recently Haiti and Hugo Chavez in  
 24 Venezuela. We install despots to support the  
 25 enslavement and murder of their own citizens and the

1 theft of their nations' resources in order to ensure US  
 2 corporate profit and their own greed. Millions upon  
 3 millions of people have been killed in this pursuit.  
 4 It is hard to resist taking a shot at the mob in the  
 5 White House. They are not unlike a crime mob. The  
 6 White House conducting their war for profit, which is,  
 7 in legalese, mass murder. In Iraq there are threats on  
 8 Syria, Iran and North Korea what else would the world  
 9 believe than that there is, in fact, a grave and  
 10 growing danger from the United States. Depleted  
 11 uranium bombs are the gift that keeps giving and giving  
 12 and giving, cancer, deformity, illness and suffering,  
 13 and it's happened here in our country.

14 MR. BROWN: One minute remaining.

15 MS. MOYER: The Bush/Cheney regimes desire to  
 16 create more nuclear weapons is at its core criminal and  
 17 treasonous. This proposal is provocative and as such  
 18 is designed to terrorize the rest of the world while  
 19 demanding other countries disarm, except of course,  
 20 Israel, and this is insane. A proposal to develop more  
 21 and more hideous nuclear weapons is not only myopic, it  
 22 is indefensible, ignorant and cruel. This will only  
 23 result in escalating nuclear proliferation. Bush's  
 24 incompetency is a minor issue. We should all be  
 25 demanding immediate impeachment and prosecution. It is

22/01.01

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1 the right and responsibility of American citizens to  
 2 exercise their right to protect themselves and others  
 3 and to stop the horrors of absolute power and treason.  
 4 It may only be matter of time until the rest of the  
 5 world calls a Summit to decide what to do about this  
 6 government and its aggression. It may not result in  
 7 the bombing of the US or even the use of nuclear  
 8 weapons on us. It may only be an embargo. If that  
 9 happens we will be without basic needs like shoes,  
 10 clothes, appliances without the tchotchkes we so love  
 11 to buy and without even tires in which to drive our gas  
 12 guzzlers. We would especially be without oil which  
 13 drives the murderous US corporate driven criminal  
 14 aggression.

15 MR. BROWN: If you can make just one more  
 16 point, please.

17 MS. MOYER: I want to quote more thing from  
 18 Dennis Kucinich, we are not victims of the world we  
 19 see, we are victims of the way we see the world. Peace  
 20 is possible.

21 And what I would like to implore you to do at  
 22 this point is to support legislation in the House of  
 23 Representatives, HR 1673 which creates a cabinet level  
 24 US department of peace which addresses all these  
 25 issues, interjects the possibilities and prevention of

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1 peace in all of our decisions. I think we have hit our  
 2 individual and national moral bottom line. I mean, we  
 3 have just about had it and I want to say this one thing  
 4 and this is to the panel.

5 I urge all scientists, all researchers, all  
 6 government employees to simply refuse to work on any  
 7 project that increases nuclear arms. We must refuse to  
 8 be complacent in any further US violence. The more of  
 9 you who refuse, the more others will refuse. The  
 10 choice, as Martin Luther King said, is no longer  
 11 between violence and non-violence, it is either  
 12 non-violence or nonexistence. Thank you.

13 MR. GRIM: Excuse me, just a second. She used  
 14 about three minutes sort of talking about the comment  
 15 process and I just want to say, we have time, we will  
 16 get through all the comments, you use your time as you  
 17 see fit for whatever you want to say about the project,  
 18 so if you want, you know, two more minutes, I think you  
 19 used up some of it in sort of a non-comment. I don't  
 20 see why not, but, but there is -- I just want to make  
 21 it clear, we will get to everybody. I think what do we  
 22 have, 20, 25, 30 more people?

23 MR. BROWN: Yeah, about 30 more. Yeah.

24 MR GRIM: So we will stay here and get all  
 25 the comments. Just so you understand, because there is

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1 talk about personal communication, if you talk to me  
2 out in the hallway, I'm not recording that as a  
3 comment. So you have to sign up to get the comment. I  
4 just want to be clear on the process. I don't want to  
5 get off track.

6 MR. BROWN: All right. Okay. Thanks.

7 MS. MOYER: I just want to say we are all  
8 human beings. We are all living here together. We  
9 don't fault anybody at Lawrence Livermore Labs  
10 personally. We have families, we need jobs, we have  
11 trained for these special areas. We just have to  
12 change our hearts about what we are doing and somebody  
13 has to lead us and take a stand. You just have to take  
14 a stand. I mean, at some point we have to stop this  
15 craziness. And I really think the department of peace  
16 is really a wonderful place to start doing this. Thank  
17 you.

18 MR. BROWN: I don't want to take any extra  
19 time. Let me offer a ten second comment. I was not  
20 suggesting that issues of morality should not be  
21 brought up here. I was simply reflecting about 20  
22 years of experience in running meetings like this and  
23 when members of the public engage in sort of  
24 confronting Department of Energy folks in what should  
25 be a dialogue in a meeting where you have several

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1 hundred people in attendance, it really doesn't promote  
2 the type of communication and such that can actually  
3 lead to some better understanding. I was simply  
4 suggesting if you want to engage in that type of  
5 dialogue, that that's probably better done one on one.  
6 If you want to discuss issues of broader morality, it's  
7 been done this afternoon. This is the proper venue for  
8 that and if I offended anybody, I apologize for that  
9 and I should hasten to add that I am not a  
10 Department of Energy employee, so if there was a fault  
11 here, it is mine, it is not theirs. So thank you and  
12 our next speaker.

13 MS. CABANNE: My name is Donna Cabanne. I am  
14 a 4-year resident of Livermore. I am a public school  
15 teacher and I am speaking on behalf of the Sierra Club  
16 tonight.

17 The Sierra Club is vehemently opposed to the  
18 ten-year operations plan for Livermore Laboratories.  
19 The plan is dangerous and unnecessary. It will  
20 continuously put our health, our environment, our  
21 agriculture and our community at intolerable levels of  
22 risk for years to come. The plan is simply  
23 unacceptable. Let's start with the dangers from  
24 tritium. The Lab claims tritium releases have declined  
25 in the last ten years. If that is true, why do

23/04.01

24/18.01

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1 Livermore groundwater wells show higher than normal  
 2 amounts of tritium? Livermore is part of a closed  
 3 water basin. We depend on our deep wells for water.  
 4 What are the current levels of tritium in the water  
 5 aquifers and in all the deep wells located in the  
 6 Livermore valley? Were wells in the greater community  
 7 tested or monitored for tritium levels? When was the  
 8 last testing? How frequently were wells located away  
 9 from the Lab tested? Were all significant sources of  
 10 water tested for tritium regardless of the distance  
 11 from the Lab? Have known plumes tested higher or lower  
 12 for tritium levels? Is it true that tritium levels in  
 13 Livermore wines are three times higher than those of  
 14 any European wines? Is it true that because of these  
 15 high tritium levels, Livermore wines are difficult to  
 16 sell in Europe because the wines fail to meet minimal  
 17 European health standards? Europeans don't have to  
 18 drink wine with high tritium levels, but we do have to  
 19 drink Livermore water. Instead of putting more tritium  
 20 at the Livermore Lab, we urge the Lab to use their  
 21 scientific experts to help us clean up the tritium  
 22 tainted soil and water that already exist in this  
 23 valley.  
 24 Increasing the plutonium at the Lab to 3300  
 25 pounds is absurd and dangerous. Instead of adding

24/18.01  
cont.

25/16.01

26/24.03

27/08.02

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1 plutonium, the DOE should be removing all existing  
 2 plutonium to a more secure site that is not surrounded  
 3 by a City of over 75,000 people. The real dangers  
 4 posed by theft or terrorists are insurmountable.  
 5 Livermore lacks the high security protections that  
 6 other sites have which makes Livermore an easy target  
 7 for any group bent on destruction. Before September  
 8 11th, no one thought a plane could be used as a weapon.  
 9 Let's not ignore the risks that exist with wishful  
 10 thinking or hide behind so-called effective ratings  
 11 that the Lab says they have. We all know there have  
 12 been serious breaches of security at the Livermore Lab.  
 13 This is simply not the facility to keep even existing  
 14 plutonium. Consolidate the plutonium at another site  
 15 for the safety of this nation as well as the safety and  
 16 the environment of this community.  
 17 Finally, please consider that Livermore has  
 18 the dirtiest air basin in the Bay Area and despite  
 19 efforts to clean it up, we are ranked as the 8th  
 20 dirtiest air basin in the nation. Our children and our  
 21 elderly suffer from significantly high asthma rates.  
 22 We don't need more accidental releases into the air no  
 23 matter how small the Lab claims these releases are.  
 24 Just what are the current asthma rates of children  
 25 living in Livermore? Are there more cases of asthma in

27/08.02  
cont.

28/30.02

29/08.01

30/25.05

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1 children detected that live closer to the Lab? Do  
2 Livermore children have more lung problems, diseases  
3 and allergies than children in communities without  
4 labs.

30/25.05  
cont.

5 Without answers to these pressing safety,  
6 health and environmental issues, it would be  
7 unreasonable to move forward with this plan. We are  
8 not interested in fact documents or EIR's that try to  
9 whitewash the inherent dangers of housing even more  
10 plutonium or tritium at the Livermore Lab.

11 Speaking on behalf of the Sierra Club, as a  
12 teacher who works with children with high asthma rates  
13 and a resident of Livermore for 24 years, I urge you:  
14 Don't waste taxpayers' money on continuing to study a  
15 site that cannot be adequately secured from the real  
16 threat of terrorism. The stakes are too high. Move  
17 these bomb making materials out of the area and  
18 consider alternative research at the Livermore Lab.  
19 Thank you very much for your time.

31/03.01

20 MR. BROWN: Suzanne Keehn to be followed by  
21 Leah Steinberg.

22 MS. KEEHN: Hello. I am Suzanne Keehn from  
23 Palo Alto. I, too, feel that our country has become  
24 morally bankrupt. Yesterday I read a heart-rendering  
25 report on depleted uranium which I know many of you

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1 know about, and it is one of, from what I understand,  
2 the by-products of nuclear waste that we don't know  
3 what to do with.

4 What I don't understand -- even if we don't  
5 care about anybody else in the world, that we will send  
6 our young men and women into a battle or into an area  
7 where we know they are going to come back and be  
8 poisoned. So yes, I do think that, I do feel that we  
9 are saying that other countries can't have this, but we  
10 can build more. And I think it is also proven that any  
11 weapon that has been made has probably been used.

12 We humans now have the power to end all life  
13 on earth as we know it through nuclear weapons,  
14 depleted uranium, nuclear power plants and nuclear  
15 waste is just as dangerous.

16 As a mother and a grandmother I am pro life,  
17 but that is pro-life on earth, all life.

18 I pray that we make the choice to live. We  
19 know that our native American elders tell us that every  
20 decision we make should be made with a good of the 7  
21 generations of the children coming after us. The earth  
22 is in crisis and we as humanity are also, but because  
23 we are in denial and we believe, we are separate, not  
24 all of us, but still too many of us; but at a  
25 subconscious or unconscious level everyone knows that

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1 we must change. We must make a choice. Economics  
2 needs to change and it can, it is just the will and the  
3 creativity and the believing what is possible. You may  
4 already be doing environmental research here, but all  
5 the resources of this lab -- nobody needs to lose a  
6 job, could be used as others have said, to clean-up the  
7 earth, air and water and to create the sustainable  
8 technology and businesses that will go to make this  
9 earth someplace wonderful to live instead of the  
10 destruction that we're seeing now. We are playing a  
11 destructive and dangerous game. We can choose to play  
12 one that is life-giving and life-sustaining. If we can  
13 imagine it, we can do it; if we have the will, we will  
14 do it.

32/07.01

15 MR. BROWN: Thank you. Leah Steinberg and  
16 Jerry Smith is next.

17 MS. STEINBERG: My name is Leah Steinberg and  
18 I refer to myself, I guess, as a child of the Manhattan  
19 project. My father and my uncle worked on the  
20 Manhattan project in Chicago at the metallurgical  
21 laboratory and I would like to read a petition that  
22 was -- I used to have these arguments with my father  
23 growing up. How could he work on the bomb, et cetera,  
24 and he died in 1991 and in about 1996 I was looking on  
25 the internet, put his name in the computer just to see

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1 what might come up and found a petition that was  
2 declassified in 1995 that I or none my family knew  
3 anything about and I'm just gonna read it.  
4 July 17th, 1945. A petition to the President  
5 of the United States. Discoveries of which the people  
6 of the United States are not aware may have affect the  
7 welfare of this nation in the near future. The  
8 liberation of atomic power which has been achieved  
9 places atomic bombs in the hands of the Army. It  
10 places in your hands, as commander in chief, the  
11 fateful decision whether or not to sanction the use of  
12 such bombs in the present phase of the war against  
13 Japan. We the undersigned scientists have been working  
14 in the field of atomic power. Until recently we have  
15 had to fear that the United States might be attacked by  
16 atomic bombs during this war and that her only defense  
17 might lie in a counter attack by the same means. Today  
18 with the defeat of Germany, this danger is averted and  
19 we feel impelled to say what follows. The war has to  
20 be brought speedily to a successful conclusion and  
21 attacks by atomic bombs may very well be an effective  
22 method of warfare. We feel, however, that such attacks  
23 on Japan could not be justified, at least not unless  
24 the terms which will be imposed after the war on Japan  
25 were made public in detail and Japan were given an

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1 opportunity to surrender. If such public announcement  
 2 gave assurance to the Japanese that they could look  
 3 forward to a life devoted to peaceful pursuits in their  
 4 homeland and if Japan still refused to surrender, our  
 5 nation might, then, in certain circumstances, find  
 6 itself forced to resort to these atomic bombs. Such a  
 7 step, however, ought not to be made at any time without  
 8 seriously considering the moral responsibilities which  
 9 are involved.

10 The development of atomic power will provide  
 11 the nations with new means of destruction. The atomic  
 12 bombs at our disposal represent only the first step in  
 13 this direction and there is almost no limit to the  
 14 destructive power which will become available in the  
 15 course of their future development. Thus, a nation  
 16 which sets a precedent of using these newly liberated  
 17 forces of nature for purposes of destruction may have  
 18 to bear the responsibility of opening the door to an  
 19 era of devastation on an unimaginable scale.

20 If after this war, a situation is allowed to  
 21 develop in the world which permits rival powers to be  
 22 in uncontrolled possession of these new means of  
 23 destruction, the cities of the United States as well as  
 24 the cities of other nations will be in continuous  
 25 danger of sudden annihilation. All the resources of

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1 the United States, moral and material, may have to be  
 2 mobilized to prevent the advent of such a world  
 3 situation. Its prevention is at present the solemn  
 4 responsibility of the United States singled out by  
 5 virtue of her lead in the field of atomic power. The  
 6 added material strength which this lead gives to the  
 7 United States brings with it the obligation of  
 8 restraint and if we were to violate this obligation,  
 9 our moral position would be weakened in the eyes of the  
 10 world and in our own eyes. It would then be more  
 11 difficult for us to live up to our responsibility of  
 12 bringing the unlistened forces of destruction under  
 13 control.

14 In view of the foregoing, we the undersigned,  
 15 respectfully petition first that you exercise your  
 16 power as commander in chief to rule that the United  
 17 States shall not resort to the use of atomic bombs in  
 18 this war unless the terms which will be imposed upon  
 19 Japan have been made public in detail and Japan knowing  
 20 these terms have refused to surrender; second, that in  
 21 such an event the question whether or not to use the  
 22 atomic bombs be decided by you in light of the  
 23 considerations presented in this petition as well as  
 24 all the other moral responsibilities which are  
 25 involved, signed by Leo Selard and 69 co-signers

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1 Including my father and I just want to say that we had  
 2 enough when the first bomb was made. We don't need to  
 3 make anymore nuclear bombs. We have enough to blow up 33/02.01  
 4 the planet as many times as we want and in my father's  
 5 name, Ellis F. Steinberg, who was a member of Atomic  
 6 Energy Commission for his entire professional life, I  
 7 just want to resubmit this petition and maybe, since it  
 8 wasn't heard the first time by President Truman, maybe  
 9 it will be heard this time and I just hope that the  
 10 scientists at the Livermore Lab who have the dedication  
 11 for science and discovery and the use of good things,  
 12 that they will help, instead, to not continue to tear  
 13 apart the atom, but to help put it back together.  
 14 Thank you.

15 MR. BROWN: Jerry Smith, Marlene Candell is  
 16 next.

17 MR. SMITH: Jerry Smith. I live in Livermore  
 18 across from the Lab. I expect to get a lot of red  
 19 flags and most of the remarks or comments have already  
 20 been discussed by the Sierra Club so I am not prepared  
 21 to enhance that at all; but, I believe that all the  
 22 security issues at the Lab have not been told to us.  
 23 There has been a lot of incidents, a lot of badges 34/30.02  
 24 lost, misplaced that would gain access to terrorists or  
 25 people with no good in their hearts. There have been

1 too many of these incidents, so far, that I think it is  
 2 not right. And so the security issue is more on my 34/30.02  
 3 mind than most of these other things. If we didn't  
 4 experiment and manufacture or whatever, we would get a  
 5 lot of good things from the products and projects from  
 6 the Lab.  
 7 Now, I am not an advocate for nuclear  
 8 weaponry, but if we don't do it and if we don't help  
 9 make it a little cleaner, if you might, or smaller  
 10 effects, then Hiroshima or Nagasaki, I think that's  
 11 good.

12 Forgive me, I lost the train.

13 There is a lot of good projects out there and  
 14 if we don't do some research on nuclear weaponry,  
 15 somebody else is going to and I know you don't believe  
 16 that, and it will raise flags, but someone is going to  
 17 do it and I think we have to be prepared to fight them 35/02.01  
 18 off -- not -- we don't want to go in there the first  
 19 time and use the nuclears, but I think it is somewhat a  
 20 deterrent, just like the death penalty might be and  
 21 maybe not. More red flags, that's good. I saw too  
 22 many green the whole evening, so I like to see a little  
 23 red but there too -- but that is okay. But that's my  
 24 opinion and I support a lot of what the Lab does, even  
 25 though I live across the street from it, I guess if

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1 it's gonna go up in my backyard, unfortunately, I would  
 2 rather sit on it than be several miles away and do some  
 3 suffering.

4 MR. BROWN: You have a minute left to see how  
 5 many more red flags --

6 MR. SMITH: Okay. Yeah. I don't want it in  
 7 my backyard either. It is too populated. I think  
 8 there is other areas of the country that some of this  
 9 stuff could be accomplished. I lived in Las Vegas for  
 10 many years and I did frequent the Nevada Test Site,  
 11 portions of it, because a lot of it is really  
 12 classified like what's over here, but I've seen the  
 13 effects of the craters that were done by nuclear  
 14 explosions underground and all, but we have benefited  
 15 from a lot of the stuff from the Lab, maybe not  
 16 nuclear, maybe some of it has progressed into something  
 17 that we do benefit from. I know, what? I am not a  
 18 scientist. I am just a common Joe that lives here  
 19 and -- trying to make a living and raise a family and  
 20 have safe surroundings. So, okay.

21 MR. BROWN: Okay. Thank you. Okay, Marlene?  
 22 And Jean DeVinney is next.

23 MS. CANDELL: I am Marlene Candell. I am from  
 24 Berkeley. I have been following these issues for about  
 25 20 years.

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1 I am going to say too, I guess two words I  
 2 want to start out with are both words starting with P.  
 3 One word is pathetic. The other word is premise.  
 4 Okay. I suddenly, finally after many years become a  
 5 grandmother of seven grandchildren in seven years so I  
 6 see this coming from another generation besides my own  
 7 and what I see is I see these parents, and I know of  
 8 those of you with children and grandchildren see this  
 9 all around you every day, these parents are so  
 10 concerned with their children. They are concerned they  
 11 get the right health food. Think are concerned that  
 12 the house is baby proofed. Have you all run into baby  
 13 proofed houses. They are concerned to walk their  
 14 children to school lest someone will snatch them on the  
 15 way even if they live next door to the school. My  
 16 children are those kinds of parents and I know that you  
 17 know those kinds of parents too.

18 Then you think what are the real dangers  
 19 surrounding these kids? What are the real big dangers?  
 20 Dangers of work and destruction and what one nuclear  
 21 bomb can do. The bomb at Hiroshima was a teeny weeny  
 22 little thing, compared to what we have got now. And it  
 23 was only one country that had them.

24 So that brings me to my other P and that is  
 25 premise. The whole premise of what we are talking | 36/01.01

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1 about here is wrong. We are talking -- our country has  
2 signed onto a number of treaties, one of the best and  
3 most wonderful is the Nuclear Non-proliferation Treaty,  
4 Article 6 states and I don't have the direct words in  
5 front of me but you can look it up, that all the  
6 signatories to that treaty will, in a timely manner,  
7 get rid of nuclear weapons. That treaty was signed  
8 several years ago. What are we planning here at  
9 Livermore? What are we planning within increased  
10 plutonium, increased tritium, increased biological  
11 agents we are going to be experimenting with? Our  
12 President has said that we have the right to, I think  
13 it is another P word, to go in there and prevent, you  
14 know, prevent another country that is even thinking  
15 about using weapons of mass destruction, to prevent  
16 them before it starts. It reminds me of when I was  
17 teaching high school, the play Julius Cesar, the big  
18 point was they thought Julius Cesar was thinking about  
19 changing the government so they were going to kill him  
20 first. Okay.

36/01.01  
cont.

21 I could go on and on, I know most of this has  
22 been talked about. I just want you to really think  
23 about the premise we are talking about here. I think  
24 we should forget about the environment. I think the  
25 environmental review, I don't want to call it a red

37/04.01

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1 hearing. I know they are concerned things should be  
2 safe if they go head with these projects but I believe  
3 the premise is wrong and these projects should not be  
4 gone ahead with. Just the very, you know, enhancing  
5 the readiness to conduct underground nuclear tests  
6 thereby encouraging other countries to regress to an  
7 area of unrestrained nuclear testing?

37/04.01  
cont.

8 Planning to test technologies for producing  
9 plutonium pits with the eventual ability to produce 900  
10 bomb cores a year. The approximate combined nuclear  
11 arsenals that is of China and France in one year. Five  
12 billion dollars a year over the next decade has been  
13 planned, five billion a year on nuclear research and  
14 development testing and production to say nothing of  
15 biological and aerosol, you know, all those things.  
16 So --

38/37.01,  
39.01

17 MR. BROWN: One minute left.

18 MS. CANDELL: If nothing else, as some of you  
19 people have pointed out, the danger of having all this,  
20 even if you were for continuing nuclear R&D and  
21 producing more bombs and more defense, even if you were  
22 for that, we are on an earthquake fault and as some of  
23 the other people have pointed out, we are exposed to  
24 terrorists, we are exposed to accidents on the freeway.  
25 It is totally unsafe for these new materials to be

37/04.01  
cont.

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1 coming here that we are talking about, the plutonium,  
2 the tritium, the aerosol biological agents. So I  
3 really think that this environmental impact situation  
4 has to be totally revised to keep it safe for us.  
5 Thank you.

37/04.01  
cont.

6 MS. DeVINNEY: My name is Jean DeVinney. I  
7 don't have anything as eloquent as many of the other  
8 speakers but certainly I support many, many, many of  
9 the things said today. I live in Oakland and have  
10 been, I am a nurse and, you know, we are already  
11 poisoning ourselves with our air, our water and our  
12 food from other chemicals that we have in the air, the  
13 water and the food, but to put more chemical and more  
14 agents into the environment such as we are talking  
15 about is incredulous to me that this government would  
16 consider doing that. I guess it shouldn't be  
17 incredulous. I just, I feel like there is a disconnect  
18 between a meeting like this and what's going to happen  
19 because I don't have any faith that anything that is  
20 said from the communities that have these projects  
21 will, in fact, really be given any kind of serious  
22 consideration because the decision really has already  
23 been made. There may be a few alterations but I don't  
24 think it will change and I think the only way that this  
25 is going to get any different is for more people to

37/04.01  
cont.

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1 believe that yes, the government does do things that  
2 are not in your best interest.

37/04.01  
cont.

3 And this is certainly an area, it may have  
4 started out in 1952 being out in the boonies, but it is  
5 no longer out in the boonies and it doesn't belong here  
6 and it should be gotten rid as far as any kind of  
7 nuclear research out here. There is great research  
8 that can be done, people can have their jobs, but we  
9 need to really stop what's going on and I just honestly  
10 don't -- I mean I know you have to go through this  
11 process and it is very kind of you to sit here and  
12 listen to this, but I honestly don't think our  
13 government is responsive.

14 MR. BROWN: Okay, thank you. Daniel Graf.  
15 Daniel, you are next.

16 MR. GRAF: Thank you for giving us the  
17 opportunity to present comments tonight. I have never  
18 given a talk about something like this in public so I  
19 am not even that well prepared. I wrote down some  
20 comments while I was listening to other people speak.  
21 Basically, I am just speaking from my heart, but I do  
22 believe that preventing the use, development and even  
23 the existence of nuclear weapons should be the highest  
24 priority of our leaders. Nuclear development programs,  
25 whether national or local in scope should be discussed

39/02.01

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1 openly and frequently by our leaders including the  
2 government, including all the agencies, including  
3 congress, including the media. This should be part of  
4 our national dialog and where is it happening? It is  
5 not really part of our national consciousness right  
6 now. To me something as serious as this where life on  
7 the planet is at stake you would think that there would  
8 be a lot of attention given to it and we are talking  
9 about it tonight but hopefully it will have greater --  
10 it will, you know, we will see the discussion grow, I  
11 sure hope it does.

12 I think that the dangers of nuclear weapons  
13 should be discussed even with the youth because not to  
14 do that is to bury our heads in the sand. It is a  
15 reality of the world that we live in, so they should be  
16 educated and I hope that you would be prepared to give  
17 a talk at a high school to talk about this to see how  
18 they might feel about having something like this in  
19 their community.

20 As long as the existence of nuclear weapons is  
21 not discussed, at least on a national level, then  
22 really their use becomes ultimately more likely over  
23 time.

24 And I really shudder to think of what the  
25 world might look like in the future if nuclear weapons,

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1 even if there are mini nukes or whatever kind of weapon  
2 they end up being, but what is our world, our future  
3 going to look like if they are ever used and it could  
4 actually happen in our life time on our clock. I mean  
5 the potential exists and I think that we have to take  
6 that very seriously.

7 I have never met anyone liberal or  
8 conservative that told me that we needed more weapons  
9 on the planet. I have never met a person that told me  
10 that more resources should go to weapons than to  
11 schools or to education. So I think what we really  
12 need and has been reflected in a lot of the comments  
13 tonight is a reality check. We should not be making  
14 nuclear weapons more usable as the administration has  
15 talked about in the past. I think that we need to set  
16 an example as a country so that other countries don't  
17 consider the use of nuclear weapons. I mean,  
18 otherwise, what kind of a case do we have?

19 But getting directly to the point of your  
20 topic tonight, in terms of health and safety, we talked  
21 about the latent cancer risk. Some of the numbers  
22 appear to be low in your analysis; but, I did notice  
23 that for workers safety the numbers actually reflected  
24 a 700 percent increase in latent cancer deaths for  
25 workers on the project and I do also think that more

39/02.01  
cont.

40/23.02

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1 research needs to be done in terms of the aggregate  
2 risks from exposure to radiation and some of the other  
3 toxins that might occur in this type of an environment.  
4 Science is now starting to look at aggregate risks  
5 rather than just isolated risks as it pertains to  
6 exposure to dangerous and hazardous materials.

40/23.02  
cont.

7 Of course there is the earthquake risk. This  
8 area is obviously known to have earthquakes. It is not  
9 out of the realm of scientific possibility within a  
10 generation to have a 7 point 0 earthquake right here.  
11 It could happen right here or it could happen 30 miles  
12 away and I would like to know is the Lab prepared for  
13 something like that?

41/14.01

14 MR. BROWN: One minute left.

15 MR. GRAF: And another issue raised in  
16 someone's comments more recently was the possibility of  
17 accidents on the freeway. This is a much more  
18 populated area than it was when Lawrence Livermore was  
19 first developed and constructed. So are we really able  
20 to deal with that? Is that inevitable that at some  
21 point there is going to be an accident in a populated  
22 area during rush hour, whatnot. So I think maybe  
23 that should be receiving a lot more attention here and  
24 in other places where nuclear research is occurring and  
25 that is all I have to say.

42/25.10

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1 MR. BROWN: All right. Thanks very much.  
2 We have been running two hours now and the  
3 court reporter is putting in over time this afternoon.  
4 So we are going to take about a seven to ten-minute  
5 break, give him a little chance to let his fingers  
6 recover. You all get a chance to stretch and we will  
7 reconvene in seven to ten minutes and get on with the  
8 rest of our comments. Thanks very much.

9 (Short recess)

10 MR. BROWN: I think our first speaker is Bob  
11 Gould, if you are ready. I think the crowd is ready.

12 MR. GOULD: Sure.

13 MR. BROWN: I think I said in the introductory  
14 statements, if you will use that microphone and  
15 identify yourself and if you have an organizational  
16 affiliation.

17 MR. GOULD: Can you hear me okay?

18 MR. BROWN: We still have 20 people to go. So  
19 I am asking people to restrict themselves to five  
20 minutes. I will give you a warning at four minutes.  
21 If you have a longer written statement you can hand  
22 that to Tom there and that would be reviewed. Thanks.  
23 Okay Bob.

24 MR. GOULD: My name is Bob Gould. I am here  
25 representing both the San Francisco Bay Area Chapter

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1 Physicians for Social Responsibility which I have been  
 2 President of since 1999 and as well as I am immediate  
 3 past President of National PSR. PSR represents 30,000  
 4 physicians, health providers and health professionals  
 5 from around the country and from its inception we have  
 6 essentially focused on stopping the dangers of nuclear  
 7 war and providing a healthy environment all of which is  
 8 connected with the issues we are discussing here  
 9 tonight. I apologize to people. I know I was called  
 10 here earlier. I have been working as a pathologist in  
 11 Kaiser Hospital in San Jose for the last 23 years and  
 12 it is always interesting to me to show up in places  
 13 like this because I have been spending whole day in a  
 14 microscope making diagnosis about cancer trying to get  
 15 this out to patients so they can get the information in  
 16 time to get chemo and radiation therapy based upon  
 17 diagnosis. It is a lot of hard work but you get a  
 18 sense of giving service to people who actually suffer  
 19 from the cancers that these plans in all of their  
 20 manifestations all of the actions are going to lead to  
 21 increase the amounts of cancers despite the fact it is  
 22 hidden and very blithely dealt with in the report as  
 23 latent cancer, latent cancer fatalities. A very  
 24 euphemistic way to deal with what a really dangerous  
 25 situation is for all of us. So when I have to deal

43/02.01

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1 with the three different possibilities that we are  
 2 offered within this rather strange lovia menu I would  
 3 say that we would favor a reduced operational  
 4 alternative, but only, and only if this is a pathway to  
 5 shutting down the nuclear weapons operations in this  
 6 lab.  
 7 This is a goal of numerous medical and health  
 8 professional organizations around the country not only  
 9 Physicians For Social Responsibility, International  
 10 Physicians For The Prevention of Nuclear War, The  
 11 American Medical Association, The California Medical  
 12 Association, The American Public Health Association and  
 13 The American College Of Physicians. All of these main  
 14 stream physician and health professional organizations  
 15 have joined with many military and political leaders to  
 16 say we should be abolishing nuclear weapons in line  
 17 with our treaty responsibilities under article 6 of the  
 18 NPT. So we certainly are in opposition to any of the  
 19 assumptions of these documents that we need to have  
 20 plans that are in line with either stockpile  
 21 stewardship or the very dangerous Nuclear Posture  
 22 Review of this administration.  
 23 All other, the no action and proposed action,  
 24 will increase the real and potential health effects of  
 25 nuclear weapons work anywhere from the predicted small

43/02.01  
cont.

44/01.01

43/02.01  
cont.

45/23.02

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1 increases in cancer from lab operations to massive  
 2 health effects that would result including cancer from  
 3 the detonation of weapons that a new nuclear arms race  
 4 is likely to bring to us. Operation should also be  
 5 scaled back towards elimination because of radioactive  
 6 contamination from Lawrence Livermore tritium leaks  
 7 that have approximated about one million curies  
 8 plutonium contamination including Big Trees Park.  
 9 There is no need to add to the radioactive legacy of  
 10 the Department of Energy, Atomic Energy Commission or  
 11 military operations that including the period of above  
 12 ground testing led to anywhere from 70,000 to 800,000  
 13 increased cancer deaths either premature or people who  
 14 will still die prematurely from such cancers. The  
 15 number doubled if we take in our counterpart testing  
 16 programs in the Soviet Union. There is no need to add  
 17 to the legacy of hazardous waste that led Lawrence  
 18 Livermore Superfund site, a toxic legacy that is  
 19 referred to in the document as still causing  
 20 degradation of groundwater which would reportedly  
 21 increase at no action and proposed action alternatives.  
 22 The assurances that there is quote no immediate or long  
 23 term threat to human health from the Superfund  
 24 contamination is from a medical and public perspective  
 25 nothing more than self-serving propaganda flying in the

45/23.02  
cont.

43/02.01  
cont.

46/24.01

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1 face of modern precautionary approaches to human and  
 2 environmental health.  
 3 MR. BROWN: One minute remaining.  
 4 MR. GOULD: Such contamination would add to  
 5 the legacy of unaddressed or inadequate cleanup of all  
 6 DOE sites that were assessed at a cleanup cost of 300  
 7 billion dollars although the National Academy of  
 8 Science has subsequently said that no cleanup is really  
 9 possible for any of these horribly contaminated sites.  
 10 So what are the critiques of the proposed action. At a  
 11 time of record budget deficits we should not be  
 12 increasing the monies for new nuclear weapons  
 13 production we should be safeguarding the fissile  
 14 materials and the ex Soviet Union sites as well as our  
 15 own nuclear weapons site. Tax payers in California  
 16 will pay 2.2 billion dollars of the 17.2 billion  
 17 proposed for nuclear weapons in fiscal year 2005. The  
 18 same amount of money we could provide one and half  
 19 million children with health care in this state at  
 20 263,000 Head Start places for children. We don't need  
 21 operations that will double the plutonium limit in this  
 22 lab, that would revive the AVLIS facility, that would  
 23 test technologies for producing new plutonium pits at a  
 24 time when we have two tons of explosive force from the  
 25 nuclear weapons arsenal for every person on earth. We

46/24.01  
cont.

47/03.01

48/04.01

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1 do not need to add plutonium enriched uranium and  
 2 lithium hydride through various procedures and NIF to  
 3 our toxic burden and in addition, none of these things  
 4 should become bind, particularly in a weapons facility  
 5 with secret lab operations such as the proposed BSL 3  
 6 lab and I wanted to close on a number of points that  
 7 deal with the real dangerous situation that we are  
 8 facing with this proposal. The proposed action  
 9 alternative has when favored as allowing the attainment  
 10 of strategies incorporated in the Nuclear Posture  
 11 Review which specifically supports the development of  
 12 new nuclear weapons for counter proliferation purposes  
 13 and which is especially dangerous when integrated with  
 14 the President's foreign national security strategy of  
 15 September 2002 which would allow the use of such  
 16 weapons in a preemptive way, lessons we should really  
 17 be aware of when we look at the present situation in  
 18 Iraq. These policies as evident from recent wide  
 19 spread reports chronicling the horizontal proliferation  
 20 occurring in Dr. Cohn's labs and elsewhere in Pakistan  
 21 should really be providing us with lessons about we  
 22 cannot continue to tell the rest of the world that the  
 23 way to security is by developing new nuclear weapons.  
 24 Now this Lab in the biological Weapons Lab or  
 25 the punitive biological weapons lab in this facilities

48/04.01  
cont.

49/35.01

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1 is certainly dangerous for a lot of the reasons people  
 2 have talked about. Dangerous organisms can escape. We  
 3 know this from the record of Fort Dietrick when  
 4 Glanders escaped and certainly over the last few days  
 5 when we seen that the highly guarded lab in China that  
 6 was researching SARS allowed such organisms to escape.  
 7 I will be done in a half a minute. But we also need to  
 8 be aware of the fact that these programs are extremely  
 9 dangerous from the stand point of encouraging a  
 10 biological arms race because when we start dealing with  
 11 lethal organisms and start dealings with genetic  
 12 modification of these organisms the rest of the world  
 13 is going to think this is an offensive biological  
 14 weapons programs. So what we do with all of these  
 15 programs here in the Lab is both bolster the threat of  
 16 biological weapons as well as bolstering nuclear  
 17 weapons which themselves under the doctrine account to  
 18 proliferation are aimed at the same types of weapons in  
 19 other countries. All this means is that we will have  
 20 ever escalating arms race which we will never be able  
 21 to stop and which is going to continue to decimate our  
 22 budgets for the next half century. It is high time for  
 23 the talented scientists of Lawrence Livermore and the  
 24 Department of Energy to look beyond the excitement and  
 25 professional satisfaction accorded by such cutting edge

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cont.

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1 technologies that actually will end up cutting the  
 2 threats of the future of humanity if we continue these  
 3 programs. Far better for the scientists here and  
 4 throughout DOE to advocate for strong inspection and  
 5 verification protocols for strengthened biological  
 6 weapons convention that the force of the delusion a new  
 7 smaller and more accurate nuclear weapons will provide  
 8 a solution. We should shut all nuclear and biological  
 9 weapons work down and use the talents of the DOE cadre  
 10 to clean up the messes of the last half century and to  
 11 address more pressing issues like global climate  
 12 change. If my hospital practice of diagnosing chronic  
 13 disease and cancers slows down a bit, it's fine with  
 14 me. Thank you.

15 MR. BROWN: Our next speaker is Srihari  
 16 Namperimal. I think he was here earlier. Are you  
 17 still here? We can get back to you. Matthew Liebman.  
 18 Good. And Virginia Browning will be next.

19 MR. LIEBMAN: Hi. It is going to be really  
 20 tough to follow, but I'll try. Good evening. My name  
 21 is Matthew Liebman. I was born in the East Bay. I am  
 22 currently a student at Stanford Law School and I am  
 23 concerned Bay Area resident. As an initial matter I  
 24 want to say that it is very inspirational to see so  
 25 many people here, so many older people here as well, it

49/35.01  
 cont.

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1 gives me hope that I can keep my ideals for a little  
 2 bit longer.

3 What I would like to do is to introduce a  
 4 different voice into this discussion, a voice that  
 5 often gets lost in the technical details of an  
 6 administrative agency. This is the narrative of a  
 7 survivor of Hiroshima. You could take the position  
 8 that such a personal story is simply irrelevant to the  
 9 supposedly cold objective calculative issues that are  
 10 before the DOE. I think that position is dead wrong.  
 11 I think stories like this are the essence of what  
 12 Lawrence Livermore National Laboratory is about.

13 This is the narrative of Akihiro Takihashi.  
 14 August 6, 1945 I was 14 years old in my second year of  
 15 middle school. I was standing in the school yard with  
 16 about 150 other students. Suddenly with a tremendous  
 17 roar, everything went pitch black. At length the smoke  
 18 cleared and I could see the school yard again. My  
 19 classmates were fallen and scattered all around. The  
 20 school building was a low pile of rubble. The  
 21 surrounding houses had also vanished. For an instant I  
 22 thought the whole city is gone. As I came to my senses  
 23 I examined my own body. My uniform was burned to  
 24 shreds. I had serious burns on the back of my head, my  
 25 back, both arms and both legs. The skin of both of my

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1 hands had peeled off and was dangling down in strips,  
2 revealing raw, red flesh underneath. Pieces of glass  
3 were protruding from my body in several places.  
4 Suddenly I was attacked by an unfamiliar sense of  
5 horror. I saw a line of survivors looking dazed  
6 dragging their legs wearily and pressing toward me.  
7 Their peeled arms dangled oddly in front them and their  
8 clothes were in tatters. Many were virtually naked. I  
9 couldn't even see them as human. I thought was  
10 watching a grotesque procession of ghosts. I saw one  
11 man with hundreds of glass shards piercing his body  
12 from the waist up. The skin of another man had peeled  
13 off his entire upper body exposing a mass of red flesh.  
14 A woman was covered in blood, one eyeball grotesquely  
15 dangling out of its socket. Next to a mother whose  
16 skin had completely peeled lay a loudly crying baby.  
17 Its entire body burned. Corpses were scattered  
18 everywhere. A dead woman's internal organs had burst  
19 out on to the ground around her. It was all so utterly  
20 gruesome. A living Hell indescribable in words. To  
21 ease the pain I went down to the river dipping myself  
22 three times. The cool water of the river was to my  
23 scorched body an exquisite priceless bomb. I am saved  
24 and with that thought for the first time my tears  
25 flowed and would not stop. As I sat there it started

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1 to rain. The first black rain I had ever seen. Huge  
2 drops that make a big noise when they fell. I just  
3 watched bewildered thinking. Is there really such a  
4 thing as black rain? I waited for it to stop and  
5 started walking home. Once home I collapsed in a coma  
6 and remained unconscious for three weeks. I battled my  
7 burns and disease for a year-and-a-half hovering  
8 between life and death. A Japanese saying goes nine  
9 deaths for one life and that was precisely my  
10 experience. My friends passed from this world with  
11 acute radiation sickness. I have survived these many  
12 years but my right elbow and the fingers of my right  
13 hand except for my thumb are bent and immobile. Keloid  
14 scars remain on my back, arms and legs, the cartilage  
15 in my ears deteriorated from the blood and pus that  
16 collected there leaving my ears deformed. I continue  
17 to grow a black nail from the first finger of my right  
18 hand. I am afflicted with chronic hepatitis. Besides  
19 my liver problem, I am afflicted with numerous other  
20 ailments and cannot help but constantly worry about my  
21 health. While struggling with this frail and damaged  
22 body I have often wondered in despair do I really need  
23 to live with all this pain. But each time I have  
24 answered, but you have already come so far. And that  
25 thought has kept me going. Of my 60 classmates I am

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1 one of the very few still alive. I cannot let the  
2 deaths of my classmates be in vain. I must be the  
3 voice conveying their silent cries to the generations  
4 to come. As a survivor, this is my mission and my  
5 duty. These ideas are engraved on my heart and I have  
6 lived to this day repeating such words to myself  
7 continually. My friends were helplessly sacrificed to  
8 the atomic bomb without ever reaching adulthood. They  
9 died writhing in agony. Their short young lives  
10 abruptly ended. Such enormous sorrow, such horrible  
11 frustration. Among humans abilities it is said that  
12 imagine is the weakness and forgetfulness the  
13 strongest. We cannot by any means, however, forget  
14 Hiroshima and we cannot lose the ability to abolish war  
15 abolish nuclear weapons and imagine a world of peace.  
16 Hiroshima is not just a historical fact, it is a  
17 warning and a lesson for the future. We must overcome  
18 the pain, sorrow and hatred of the past. We must  
19 conquer the argument that the damage inflicted and the  
20 damage incurred in the name of war were justifiable.  
21 We must conquer the logic that the dropping of the bomb  
22 was just justifiable. We must convey the spirit of  
23 Hiroshima. The denial of war and hope for the  
24 abolition of nuclear weapons throughout the world. I  
25 sincerely hope you have understood the spirit of

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1 Hiroshima. I will always be praying for your steadfast  
2 efforts and progress towards the abolition of nuclear  
3 weapons. You can call this defense, I think it is  
4 terrorism. You can try to paint it green but the color  
5 that comes through when you scratch the surface is red.  
6 Thank you.  
7 MR. BROWN: Virginia Browning to be followed  
8 by Maureen Hartmann.  
9 MS. BROWNING: I haven't spoken in a hearing  
10 about nuclear anything for a long time, but I have a  
11 lot of anxiety lately so maybe this will make me feel  
12 better.  
13 That Japanese, the student that he just  
14 mentioned reminds me of the soldiers that are coming  
15 back from Iraq and the ones that are allowed to be  
16 tested with the test that means anything and then to  
17 have the test results analyzed have found that they are  
18 poisoned with radiation from supposedly depleted  
19 uranium. So we were -- I grew up in, my name is  
20 Virginia Browning, I probably forgot to say that again.  
21 I grew up in Utah during the 1950's when they had above  
22 ground nuclear testing and then in the sixties when  
23 they had huge leaks in the underground tests that were  
24 not widely acknowledged and a lot of people don't know  
25 about those leaks which drifted all across the country

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1 and the tests may resume again, so they are saying,  
2 after a halt, hope beyond hope -- a halt that happened  
3 in the '90's but now they are saying they may resume  
4 testing again.

5 I guess, yeah, I just wanted to say something  
6 in the beginning of this sort of written thing about  
7 the lying that they did to us then and that they  
8 continue to do and I know you told us not to make  
9 personal comments to the panel but it starts to feel  
10 here like -- I mean, you know, you say the people that  
11 are really going to have the power to make this  
12 decision are two individuals, but if there are any  
13 people, somebody said, who are profiting from these  
14 things, I mean I wish they would get jobs in video  
15 stores before they would put the lives of children  
16 including possibly their own at risk by continuing to  
17 work making these weapons. So anyway --

18 Who tells us that it is okay to spread these  
19 poisons or tells you it is okay? A God? Is this your  
20 God? If you or someone you know finds you have  
21 miraculously created a baby and that baby is found to  
22 say -- have a terminal illness such as cancer or  
23 painful nerve damage, are you going to stick to your  
24 guns and say that this child deserved it and the reason  
25 I'm bringing this up is because a lot of people really

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1 justify this kind of thing by somehow thinking that  
2 there is some force in the universe that actually gives  
3 them permission to make these things. Do you believe  
4 that this child would be working out God's will, a  
5 punishment, a sort of karma for this life for something  
6 the child did in another life. What if she starts out  
7 being a really good kid and that you dare to think that  
8 it could be in part because of your own nurturing.  
9 What if this particular child's greatest sin if you so  
10 wanted to so describe it is a kind of self center  
11 chattering that takes effects maybe late at night after  
12 she has been required to attend an event with her  
13 parents and she is trapped in a car with a companion so  
14 maybe she goes on and on in ways that you first find  
15 irritating then maybe obnoxious and repetitious, but  
16 what if that's the worst it gets and otherwise she is  
17 just a really incredible helpful child. But then what  
18 if she gets cancer and are you the one that is gonna  
19 say it's punishment for these late night sins of hers  
20 or that it is your punishment for not planning better,  
21 for not creating a situation that was too hard for her  
22 to resist by forcing her to attend these events?

23 Does God give you permission to spread these  
24 around, these poisons? You know the statistics. Young  
25 soldiers coming back from Iraq now -- I already said

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1 that part at the beginning. So I can skip it.  
 2 MR. BROWN: You have got one minute left.  
 3 MS. BROWNING: Okay. The soldiers were told  
 4 the same thing as you about ingesting versus breathing  
 5 or about the amount likely to have been breathed yet  
 6 there they are with their poisoned bodies and their  
 7 poisoned wife's bodies something have mixed with their  
 8 wife's loved having been entered and having been  
 9 retained.  
 10 I have thought it was useless to come here.  
 11 These are your jobs for which you have been trained by  
 12 so called science. Funded or not by certain  
 13 benefactors but beyond the eschewability to be truly  
 14 objective, some of you should have your doubts but you  
 15 maybe you will keep these things anyway because they  
 16 are your incomes and your pensions but yet I had to  
 17 come here. If no one says anything. We too are at  
 18 fault. I hope that somehow some among you can decide  
 19 to get jobs in video stores before you will put the  
 20 lives of yours or other people's children at risk.  
 21 MR. BROWN: Thank you. Maureen Hartmann to be  
 22 followed by Avaran Ipsen.  
 23 MS. HARTMAN: I am Maureen Hartman. I am a  
 24 secular Franciscan, which means I try to follow Saint  
 25 Francis of Assisi who would not let his followers bear

1 arms. I am going to read a poem and then I am going to  
 2 unpack it with my reflections.  
 3 Victory over devilish incarnation. Nuclear  
 4 weapons are the devilish incarnation of human kind's  
 5 hatred and fear. The only one stronger than them is  
 6 the deity incarnated in flesh rather than in cold metal  
 7 and hatred. Love and its vulnerability overcomes its  
 8 violence. That is the meaning of civil disobedience  
 9 taking on the suffering of an enduring violent spawn in  
 10 metallic hatred like Jesus who endured the nails on the  
 11 cross. Thus, we hopefully ransom those, the homeless  
 12 and hungry who suffer and die, because the use of  
 13 precious funds to build nuclear weapons swallows up  
 14 monies that could be used to relieve the pain of  
 15 poverty.  
 16 And now my reflections, a few reflections. I  
 17 believe nuclear weapons should be banned because they  
 18 are a moral evil in the world. They are an incarnation  
 19 or embodiment of hatred of nations for one another.  
 20 They spread violence in society in many ways. First if  
 21 we have them they will be used. The US is planning for  
 22 their use in Iraq. Second they kill without ever being  
 23 used because the billions and billions of dollars spent  
 24 in their design and creation is diverted from the  
 25 financial need of the hungry and underdeveloped

50/32.04

51/01.01

52/03.01

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1 countries and even in the United States.  
2 Third violence begets violence and they are a  
3 cause of violent criminal acts in the wealthy  
4 United States because violent examples in adults lead  
5 to imitation at least in spirit by children and violent  
6 examples among the leadership lead to violence among  
7 the followers.

52/03.01  
cont.

8 So we can say that they stand on -- that the  
9 stand on defense taken by our Presidential candidates  
10 are a cause of the growing criminal violence in our  
11 country's population. Adults in Oakland follow their  
12 lead by being violent with one another and the children  
13 follow the adults. Thus we see growing violence in the  
14 schools among the young. Thank you.

15 MR. BROWN: Avaren Ipsen will be followed by  
16 Gus Schleis.

17 Ms. IPSEN: Hello, my name is Avaren Ipsen. I  
18 live and work in Berkeley within the fallout radius, if  
19 there is of a catastrophic accident or a terrorist  
20 attack here in Livermore. I am a Ph.D. candidate in  
21 biblical literature at the GTU, which is the graduate  
22 theological union in Berkeley and also a lecturer at  
23 UC Berkeley. I feel it's my duty to criticize my  
24 employer, UCB, who manages the Lab. Thus I have joined  
25 the coalition to demilitarize education. I specialize

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1 in eschalological texts of the Bible such as the Book  
2 of Revelation. Eschalology is the study of the end.  
3 So you could call me a kind of expert on biblical  
4 Armageddon.

5 The era I grew up in in the '60's and '70's  
6 was saturated with apocalyptic end of the world dooms  
7 day scenarios such as in films that terrified me like  
8 the Planet of the Apes. On The Beach. Omega Man. The  
9 Last Man on Earth. Soyilent Green. The Day After.  
10 Testament, to name a few. Charlton Heston always pops  
11 into my mind when I think of the end or have nightmares  
12 about it. The DOE's ten year plan for Livermore brings  
13 back all of these vivid popular films from my youth in  
14 the '70's. Are you out there Charlton? Bio warfare  
15 agents, anthrax, Bubonic Plague, botulism, all plan on  
16 coming to the Bay Area with its millions of  
17 inhabitants. Then there is the plan to double the  
18 amount of on-site plutonium here at Livermore.

53/04.01

19 Next, pit production and designs for more  
20 usable nuclear weapons such as mini nukes and robust  
21 earth penetrators. Activities that violate  
22 international treaties. This sounds like a bad '70's  
23 movie I saw at the drive-in as a kid.

54/01.01

24 But it's a real plan called SWEIS. Or  
25 site-wide Environmental Impact Statement. This plan is

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1 to be occurring here on a major earthquake fault line  
 2 with close proximity to a major metropolitan area. 55/14.01  
 3 Please someone wake me up from this nightmare. As a  
 4 scholar of the end, we liberation theologians pray not  
 5 for the total annihilation of all life, the end we pray  
 6 for is the end of violent colonial imperial regimes  
 7 that refuse to stop trying to dominate the world. I  
 8 think given the proclivity of our current  
 9 administration for preemptive or preventive war we need  
 10 to curb this illegal, immoral nuclear proliferation  
 11 agenda that I see in SWIES. It is already time to  
 12 clean up the mess already here and make Livermore a 56/07.01  
 13 civilian science lab that solves global warming and  
 14 cures cancer, thanks.  
 15 MR. SCHLEIS: Hi, my name is Gus Schleis. I  
 16 am nine and I live in Berkeley. I am in the fourth  
 17 grade at Lacon Elementary. I don't like nuclear  
 18 weapons. I think they are scary and I also think they  
 19 are a waste of money. Why isn't there money for -- why  
 20 isn't there enough money for my school but billions for 57/03.01  
 21 nuclear weapons? There are schools closing in  
 22 Livermore. Where is the money? I think it's in the  
 23 bombs. I think nuclear weapons are scary.  
 24 I like the idea of fresh, non-polluted snow to  
 25 play in but not -- but I don't like the idea of being

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1 in a nuclear winter with it snowing ashes. I want a  
 2 future, not a nuclear winter. I live within the  
 3 fallout zone if there is an accident at Livermore. I  
 4 also have a cousin who works on the laser in the labs  
 5 and this report says there will now be plutonium where  
 6 he works. If it is not plutonium, it might be anthrax  
 7 or the plague. If they now have biological weapons at  
 8 the Lab, I am worried about my cousin. I am worried  
 9 about me. In the Bible Jesus said: Blessed are the  
 10 peacemakers. They will see the kingdom of God. It  
 11 does not say blessed are the war makers.  
 12 MR. BROWN: Okay. Betty Crosby is next and  
 13 Rebecca Moeller will follow. (Inaudible) And the number  
 14 of people will speak after you appreciate that. Thank  
 15 you very much. Rebecca Moeller? Carolyn Israel? Eva  
 16 Bruner? And Don Larkin is next.  
 17 MS. BRUNER: My name is Eva Bruner and I live  
 18 in Santa Cruz and I am part of the Santa Cruz Weapons  
 19 Inspection team. We have a Lockheed Martin where I  
 20 live and we started our organization because of the  
 21 weapons of mass destruction problem in Iraq, weapons  
 22 that were never found and guess where most of the  
 23 weapons in the world are, in our country.  
 24 So, everything that I -- I kept trying to take  
 25 notes and figure out what I was going to say and

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1 couldn't quite do it and everyone has said everything I  
2 want to say, but I have one more thing, and that is  
3 sitting here listening to all of this and realizing  
4 that two people will make this decision for an entire  
5 population is utterly unacceptable and I wonder what it  
6 would be like if one of those people was a mother and a  
7 grandmother? Would the decision be different? And I  
8 think that's something to take into account. Why is  
9 this decision being made? Why are there nuclear  
10 weapons? Is there a future? Do you think that little  
11 girl feels like she has a future? Do your own  
12 17-year-old children feel like they have a future? I  
13 am 44 and I don't feel like I have a future. We are  
14 not naive. We know what we are talking about. We know  
15 the difference between life and death, creation and  
16 destruction and we have a choice and our choice needs  
17 to be for peace. Thank you.

18 MR. BROWN: Don Larkin and Lynda Marin is  
19 next.

20 MR. LARKIN: My name is Don Larkin. I am not  
21 affiliated with any group but I do appreciate  
22 Tri-Valley Cares, Western States Legal Foundation,  
23 others.

24 I also appreciate you being here, having this  
25 hearing, but I think that the people who are actually

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1 making the decision ought to be here to listen to what  
2 the people are saying rather than intermediaries who  
3 just get summaries of our comments.

4 In five minutes, there is not a lot you can  
5 say, but I would like to just pick up one part of what  
6 I really intended to talk about.

7 We know from the Nuclear Posture Reveiw that  
8 the reason that they are trying to add these  
9 capabilities at the Lab is that the Lab will be  
10 involved in developing new more usable quote unquote  
11 nuclear weapons. That being the case, we must take  
12 into account the effect of these activities of the  
13 research and development and we must take into account  
14 the environmental effect of the products of this Lab as  
15 well. Let's just take one of those effects and that is  
16 proliferation. The research and development that they  
17 propose at this Lab, one of the effects will likely be  
18 increased proliferation of nuclear weapons. Weapons of  
19 research and development is the engine of  
20 proliferation. It is where it begins.

21 First of all, all technology proliferates  
22 perhaps especially weapons technology. I suppose at  
23 one time there was somebody who had invented a machine  
24 gun and thought he would have it just for him it itself  
25 but it was a futile hope. At one time we thought we

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1 could keep the atom bomb secret to ourselves. That was  
2 also a futile hope. It doesn't take espionage though  
3 that occurs. People see what you are doing, people see  
4 the direction of the research, people make their own  
5 inferences and much cheaper than what you are doing  
6 they come to similar conclusions and develop things  
7 independently of you, but the great sums that they are  
8 spending in fact will result in a proliferation of  
9 similar weapons around the world, more usable weapons.

10 There is also -- contributes to proliferation  
11 by example. If we can have nuclear weapons why can't  
12 anybody else. In we can develop them, why can't  
13 anybody else. That is the logic that will prevail in  
14 the world.

15 Back in 1995 after a series of public hearings  
16 there was a study released from the  
17 Department of Energy on the issue of proliferation.  
18 The final study came out in December of 1995 in what is  
19 called the National Ignition Facility on the Issue of  
20 Proliferation. Predictably, that study came to the  
21 conclusion that NIF would not contribute to the  
22 proliferation of nuclear weapons and it rested that  
23 conclusion on a few assertions. I want to look at what  
24 those assertions were.

25 First the main assertion was that the Labs

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1 were not pursuing and NIF would not be used to pursue  
2 new weapons development. Since it wasn't being used to  
3 pursue new weapons development it wouldn't contribute  
4 to proliferation. We now know that is not the case.

5 It was also asserted that the Comprehensive  
6 Test Ban Treaty would be in place to prevent test  
7 explosions and test explosions were necessary to create  
8 new weapons. In fact, they claimed that the  
9 experiments at NIF would contribute to the test ban by  
10 making it possible to monitor the stockpile without  
11 testing, that is, by making the CTB -- the, making the  
12 content of test ban more palatable to the Lab. It was  
13 a kind of trade off, a deal, but we now know that they  
14 are contemplating possibly resuming testing at the  
15 Nevada Test Site and we also know that test explosions  
16 are not necessarily needed to develop new weapons. So  
17 that assertion goes.

18 MR. BROWN: Sorry, one more minute remaining.

19 MR. LARKIN: It was also claimed that the  
20 openness at the Lab would let the world see the Lab  
21 wasn't interested in developing new weapons. Now the  
22 Lab is no longer open. And it was claimed that  
23 plutonium would not be used in NIF targets of the  
24 National Ignition Facility and now they are proposing  
25 to use plutonium as targets in the National Ignition

59/01.01  
cont.

60/26.01

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1 Facility.

2           Given all of these assertions, that all of  
3 these assertions have been knocked away, all of the  
4 pillars of that conclusion that the work here does not  
5 contribute to proliferations have been knocked away.  
6 We need another study. Another study after public  
7 comment. We need to reopen this issue in a separate  
8 hearing or else in this hearing after a new draft comes  
9 out and we need to get at the bottom of this. There is  
10 more to be said about this but I think I am running out  
11 of time, but the important point is that we don't want  
12 just -- I don't want to see in the response to comments  
13 another assertion that these experts will not  
14 contribute to proliferation. I want to see an  
15 opportunity to comment. I want the rational argument.  
16 I want them to deal with the past assertions that they  
17 made that turned out to be totally false. Thank you.

60/26.01  
cont.

59/01.01  
cont.

18           MR. BROWN: Thanks very much. Our next  
19 speaker is Lynda Marin. I also note we have several  
20 people coming up following who have spoken in the  
21 afternoon and I will just ask since they have already  
22 made comments for the record, if they can be reflecting  
23 on perhaps abbreviating their comments just a bit to  
24 allow folks following them who haven't spoken yet to  
25 speak in a timely fashion. Sorry to interrupt.

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1           MS. MARIN: My name is Lynda Marin, I am with  
2 the Santa Cruz Weapons Inspection Team. And I could  
3 certainly say among the many points that have been  
4 brought up here about NIF, for instance, since you  
5 spoke to it so well a moment ago, that it for instance  
6 is plagued by technical problems. It is not likely to  
7 achieve ignition at all. That the cost has  
8 skyrocketed. It was estimated at one million now it is  
9 at 4.2 million according to the JOL. It is difficult  
10 to accurately foresee the potential environmental  
11 problems that will result from it, that it emits  
12 radiological air pollution from the stack in the  
13 building and also that the NIF accident study doesn't  
14 account for things other than fatalities. Certainly, I  
15 have seen illnesses that make a fatality seem  
16 preferable and some of those illnesses have been  
17 clearly the result of exposure to nuclear weapons  
18 industry or nuclear power industry. So those I could  
19 say were my concerns and the fact is I have ten  
20 thousand other concerns that are like that at about  
21 that level of generalization or specificity but what  
22 I'd really like to say more is that as a child growing  
23 up I was a child, I grew up in the 50's. I was born in  
24 the 40's. And I remember very early on one of our  
25 first games as it were was to make bomb shelters

61/26.03

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1 because the Russians were going to send missiles to us  
 2 and kill us and we did that sort of thing in school all  
 3 the time. We had drills to save ourselves by putting  
 4 ourselves under our desks. And little by little I  
 5 began to think: You know, a bomb is going to be  
 6 stronger than my desk. I just knew that desk just  
 7 wasn't really going to do it. And then when I was  
 8 about nine or ten I began to hear about the problems of  
 9 nuclear weapons and how they didn't -- and also in my  
 10 teens about nuclear waste and the problems that always  
 11 concerned me was that no one could say where the waste  
 12 was going and how it would be dealt with and I kept  
 13 asking people because I was so concerned in my, you  
 14 know, ten, 11 and 12-year-old mind about making a mess  
 15 you couldn't clean up. I was always made to clean up  
 16 my messes and whether or not I liked it and I always  
 17 did finally have to do it but it seemed like the people  
 18 who made these weapons didn't have to do it or the  
 19 logic that they would figure out later how to do it.  
 20 It didn't work if I said later to my parents.

21 So I went through my childhood and my  
 22 adolescence feeling as though they had a privilege,  
 23 those makers of bombs and nuclear energy that I didn't  
 24 have and then when I grew up I would understand that  
 25 better and when I came to understand and live into was

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1 MAD, it was truly MAD, mutual assured deterrents, and I  
 2 thought the people that came up with MAD were joking.  
 3 I thought that the word MAD was a joke, a sort of  
 4 sarcastic way of explaining a crazy thing. But -- and  
 5 amazingly we lived through MAD. But we got to here and  
 6 here seems more mad than ever to me and if problem, as  
 7 many people have said, is that in responding to any of  
 8 these particular points about the EIS, is, in a sense,  
 9 buying into the premises that it is okay to talk about  
 10 the possibility that we really could create these  
 11 nuclear weapons and possibly use them because of course  
 12 you don't make things that you are not eventually  
 13 planning on using and so what I would say -- and this  
 14 is, I guess, the last thing I want to say is: When I  
 15 sit here and I watch you do your job of listening and  
 16 being dispassionate and you have done very well at that  
 17 except for the mention about the movies in the '70's, I  
 18 see that you really did respond to that, but other than  
 19 that, that you would be the conveyors of this input  
 20 from this group of people to two other people who never  
 21 even have to feel our humanity or the intensity of our  
 22 concerns or the reality of our life situations is  
 23 absolutely, totally unacceptable and I feel bizarrely  
 24 complacent, you know, in some kind of immoral act.  
 25 So, having said that, I certainly hope and

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1 encourage that this entire plan will be rebrought to  
2 the public within another framework whereby the people  
3 who are making the decisions really do have to listen  
4 to the people who will be affected by the decisions.  
5 Thank you.

62/31.04  
cont.

6 MR. BROWN: Sasha, is it Sajovic? Okay. And  
7 Josh Piper will follow.

8 MS. SAJOVIC: My name is Sasha Sajovic and I  
9 am here as a representative of Green Law at the  
10 University of Washington Law School. I have spoken to  
11 some of you already today and submitted some  
12 information prepared by 20 students at Green Law on a  
13 number of issues raised in this environmental impact  
14 statement including waste generation and disposal and  
15 transportation.

16 Me and my colleagues, Josh Piper and Jason  
17 Morgan are here from Washington about four hours from  
18 Hanford which is the nation's most contaminated nuclear  
19 waste site and Hanford of course was one of the sites  
20 of the first generation of weapons production and  
21 weapons proliferation and watching Hanford and looking  
22 at the first generation of weapons production and  
23 weapons proliferation we found that there are a lot of  
24 very important concerns that haven't been addressed in  
25 this document, just a little trip down memory lane. I

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1 wanted to tell you guys a little bit about a place  
2 called Chelybinsk. When we were building up our  
3 arsenal during the cold war Russia was also building up  
4 theirs and as many of us know they weren't as careful  
5 with a lot of their radioactive waste, in fact, some of  
6 it ended up directly in water bodies used by people to  
7 bathe and drink that they were not aware it was there  
8 and some of it ended up in a lake called Lake Carashe  
9 which at point actually dried up, was part of a dust  
10 storm and affected a great deal of people. Also in  
11 Russia, the Tomsk facility was subject to an incident  
12 and I think it is important to note that a lot of  
13 facilities in Russia were mimics of facilities built  
14 here using stolen information on how to build those  
15 facilities. Given the AVLIS and some of the  
16 implications that facility has I think this is very  
17 important for us to consider and I also think it is  
18 important for us to consider some of the things that  
19 happened right near our home in Washington during that  
20 cold war period such as the Green Run which subjected a  
21 number of people to intentional releases of iodine 131  
22 which resulted in a great deal of sickness which is  
23 currently being litigated.

24 I also think it is important to recognize that  
25 the waste production at Hanford resulted in a million

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1 gallons of high level nuclear waste which have leaked  
2 out of their tanks and are in the groundwater on the  
3 way to the Columbia River.

4           The legacy at Hanford and at other sites  
5 around the country already threatens workers in  
6 communities daily. Workers that we are familiar with  
7 are the workers over at the high level waste tanks at  
8 Hanford who the Government Accountability Project has  
9 documented have been subject to vapor exposure and the  
10 vapors that they are exposed to are a mix that some  
11 people refer to as a witches brew which contains  
12 chemicals and radioactive materials. There have been  
13 at least 45 exposures in a period of less than two  
14 years and people have suffered potentially life  
15 threatening consequences including weeping lungs and  
16 other really awful sounding symptoms.

17           Communities at risk when wastes are  
18 transported include up in Washington for example, a  
19 number of native American tribes who have the right to  
20 live and fish along the Columbia River and throughout  
21 the United States. If these new materials are produced  
22 there will be waste consequences that will have to be  
23 dealt with.

24           The legacy created in the first generation of  
25 weapons production and proliferation has not yet been

64/24.01  
cont.

64/24.01,  
22.02

1 resolved. This is easy to see from the shuffling that  
2 underlies this document. A careful look doesn't  
3 indicate a very thorough understanding of where all the  
4 waste will go. I know that a number of people have  
5 mentioned Department of Energy could not identify a  
6 location for all of its plutonium once it is produced.

7           MR. BROWN: One minute remaining.

8           MS. SAJOVIC: Thank you. So I wanted to  
9 conclude my statements with some specific information  
10 that I had the opportunity to look at regarding Hanford  
11 in dealing with just this kind of proposal. There we  
12 did a study at Heart of American Northwest when I was  
13 working there for a few years on off-site waste  
14 disposal at Hanford and what we found was rather  
15 appalling. There were real problems with traceability  
16 of documents, manifests, other information that would  
17 be vital in the case of an accident and particularly  
18 important in this case and I have mentioned this to the  
19 folks up here is that although Lawrence Livermore was  
20 not one of the sites that we examined Lawrence Berkeley  
21 was and Lawrence Berkeley will be sending waste to  
22 Lawrence Livermore if this plan is implemented and one  
23 of the very important things that needs to be  
24 considered is that Lawrence Berkeley has a history at  
25 Hanford a six year history of shipping, what it labeled

64/24.01,  
22.02  
cont.

65/36.01

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1 as low level waste documents and what Hanford buried as  
 2 low level materials in a low level burial ground and  
 3 these were actually mixed wastes or what we call in  
 4 Washington dangerous wastes and so given the history of  
 5 waste proliferation and the history of contamination of  
 6 communities and effects on individuals and the history  
 7 of Department of Energy carelessness or I may even go  
 8 so far as to say ineptitude in that case. The  
 9 Department of Energy needs to thoroughly consider the  
 10 history of the first generation of weapons production  
 11 as it endeavors to enter a new generation. Thank you.

12 MR. BROWN: Ready to roll? Josh.

13 MR. PIPER: My name is Josh Piper along with  
 14 Sasha and Jason I am from the University of Washington  
 15 School of Law and we did have a chance to comment this  
 16 afternoon so I will try to keep this brief.

17 Before I go into kind of what we came here to  
 18 talk about I wanted to express gratitude and  
 19 appreciation for all the personal stories, the  
 20 narratives, poems, expressions of anger, even in the  
 21 arguments of morality about whether anyone should ever  
 22 be doing any of these things that have been expressed  
 23 tonight and I am excited to see that tonight because I  
 24 can't make those arguments tonight because that is not  
 25 my role here today. My role, our role as law students

64/24.01,  
22.02  
cont.

1 is to point out the failures of DOE in this document,  
 2 but rest assured our goals are same. By highlighting  
 3 these faults we make them go back and do analyses and  
 4 do it again and again and again until hopefully the  
 5 common sense it's been expressed by so many folks here  
 6 tonight becomes apparent to the leaders of the DOE.

7 So with that said I will briefly talk about  
 8 some of the inadequacy we found in surveying the whole  
 9 EIS. One of the biggest ones was one of the stated  
 10 purposes of the continued operations of Lawrence  
 11 Livermore was preventing the spread and use of nuclear  
 12 weapons world wide. And being, having that as one of  
 13 the main goals we found it really odd that there is no  
 14 discussion of proliferation issues, no discussion of  
 15 international treaties violations anywhere in the  
 16 document and that is even something that is contrary to  
 17 DOE's own history in the last eight or nine years they  
 18 have done similar non-proliferation analysis in at  
 19 least four environmental impact statements they have  
 20 prepared.

21 Second, their accidents scenarios involving  
 22 airplanes, is kind of their main, their large  
 23 catastrophic event, only goes so far as to take into  
 24 account small aircraft from a private planes from local  
 25 airports. We find that fairly inadequate being the

66/31.04

67/01.01

68/25.08

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1 closest of the Lab to three really large commercial  
2 airports compounded with the fact that the  
3 probabilities of these accidents are only taken into  
4 account as a random accident not as an intended target  
5 of say a terrorist organization.

68/25.08  
cont.

6 Lastly, something I didn't get to express too  
7 well this afternoon, is the range of alternatives that  
8 have been considered in this document. Basically what  
9 they have done is they give you a minimum reasonable  
10 amount of activity and that is called the reduced  
11 action alternative. The highest level of reasonable  
12 activity and that is the proposed action and then the  
13 CEQ guidelines require they have a no action  
14 alternative which in this case actually involves a lot  
15 of actions, supposedly, that have already been  
16 approved. So what you get is this huge extreme from  
17 the maximum allowable to the minimum allowable, three  
18 options in between and nothing else and we just think  
19 that it's just, it's disconcerting to us that for all  
20 the proposed projects, all 20 or some other proposed  
21 all you have are the same exact three options we find  
22 it hard to believe that even a few of these projects  
23 there is not some other point along the way where some  
24 of those projects could be analyzed at a lower level  
25 and the reason is that it becomes very convenient for

69/31.01

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1 the DOE, it is a win win and impossible situation  
2 because if they go so far down to the minimal level it  
3 is easy to say that it doesn't fulfill mandated goals  
4 by Congress or whatever. So they are left with these  
5 other two options, one is the reduced -- or the no  
6 action which already includes a lot of the stuff they  
7 want to do and even the proposed action which is even  
8 more so. So we just feel they really need to go back,  
9 do this again, recirculate a new EIS and really  
10 consider sort of medium points along the way in order  
11 to come out with a good agency decision. Thanks.

69/31.01  
cont.

12 MR. BROWN: Thank you. Okay. Jason Morgan.  
13 MR. MORGAN: Good evening. My name is Jason  
14 Morgan I am also with Green Law. I want to talk to you  
15 a minute about what is this EIS supposed to do. What  
16 is its purpose? It is 2000 pages. Is has got  
17 appendixes here and there. Lots of stuff. What is the  
18 purpose of having this EIS. EIS of course is mandated  
19 by the National Environmental Policy Act which says  
20 that an agency needs to give environmental values  
21 appropriate consideration in decision making. On top  
22 of that the Council for Environmental Quality has  
23 decided to produce a set of regulations about how to  
24 implement the NEPA guidelines and CEQ comes up to a  
25 similar conclusion that NEPA procedures must ensure

70/31.02

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1 that environmental information is available to the  
2 public officials and citizens before decisions are made  
3 before actions are taken.

70/31.02  
cont.

4 DOE then makes its own regulations to  
5 interpret the CEQ regulations and the DOE comes to the  
6 same conclusion that it is DOE's policy to follow the  
7 letter and spirit of NEPA comply fully with the CEQ  
8 regulations. So what does this EIS do? Does this EIS  
9 provide the necessary information to make an informed  
10 decision? Let's take one example. Reading through the  
11 EIS you can find the passage where it says there is  
12 1,014 barrels of TRU waste transuranic waste that need  
13 to be shipped out. In order to do this there is  
14 section 3.2.2 has the Waste Isolation Pilot Project  
15 mobile vendor which will ship the stuff to the Waste  
16 Isolation Pilot Project.

71/22.01

17 So how does that happen? What is the first  
18 step that happens when they ship this TRU waste. I  
19 can't tell you and I can't tell you because the Waste  
20 Isolation Pilot Project mobile vendor is categorically  
21 excluded which means the Department of Energy has  
22 decided they don't have to do a review on that so they  
23 made a decision at some point to do that. So I follow  
24 the appendix along and I found that it's, the decision  
25 was made in a memo between two people, I can't remember

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1 their names now, which is not available to me. So I  
2 don't know why they made that decision. So is that  
3 going to help me decide how it is that we came to this  
4 decision?

71/22.01  
cont.

5 Okay. So let's get beyond that. What about  
6 what are they going to put it in. What are they going  
7 to put the waste in. What is this categorically  
8 excluded vendor going to put the TRU waste in. They  
9 are going to put it into TRU PACT II containers which  
10 are very nicely outlined in appendix J for us to read.  
11 The problem is that on March 15th of this year the  
12 Department of Energy announced that it was intending to  
13 use TRU PACT III containers, TRU PACT III containers  
14 analysis is not included in appendix J. So again  
15 looking at this document I have come to the conclusion  
16 that well, I don't know what -- are they using this or  
17 not?

72/20.05

18 And who is putting it into the containers and  
19 how was that decision made? I don't know. The  
20 document is supposed to provide information for me for,  
21 as we mentioned, two people to decide whether or not to  
22 implement this program and there were some concerns  
23 voiced shortly ago that they don't feel the weight of  
24 the decision that they are making. They don't feel the  
25 weight of the decision on the people that are around us

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1 and one of the reasons that they don't feel that weight  
2 is because the EIS isn't telling them about that  
3 weight. It is not making clear by what it says in the  
4 document what the weight will be on the community  
5 because it hides behind things like minimal impacts,  
6 negligible effects and ten to the minus 14 LTF's, so --

72/20.05  
cont.

7 MR. BROWN: One minute left.  
8 MR. MORGAN: Thank you. I just want to say  
9 thanks for being here and I was really moved by being  
10 here for the last eight hours and listening to a lot of  
11 people's testimonies and it was very inspirational,  
12 thank you.

13 MR. BROWN: We now have the patient and  
14 gracious Bob Russell to be followed with Stephen Kelly.

15 MR. RUSSELL: I am from up the road. I am a  
16 member of a citizen group, people for a new nuclear  
17 policy. I am also a person from a community of faith.

18 So I thought I might interject some words of  
19 scripture, perhaps, for some words of hope.

20 Mene Mene tekkel parsin. For the biblically  
21 illiterate and illiterate alike one might ask what do  
22 these words mean and further what possible bearing  
23 could they have on this EIS hearing. Don't feel bad.  
24 Nobody knows. Nobody but the prophet Daniel. I won't  
25 go on here with anymore quotes from the scriptures but

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1 those who are interested might look in the book of  
2 Daniel, it is chapter five, verse 24 and following. I  
3 would like to try and put the story in a nutshell. It  
4 is a story of this most powerful nation on earth in a  
5 different time, a different place but with many similar  
6 inferences. In the story the self-proclaimed ruler of  
7 this kingdom who lost track of his humanity and claimed  
8 unto himself the power of life or death over his  
9 subjects has a terrible, shall we say, nightmare. He  
10 has been partying the night before and at his request  
11 they profane the sacred symbols of our tradition.  
12 There is a strange scene in this scripture. No one can  
13 quite understand his dream of the future and this hand  
14 comes out of nowhere and writes on the wall. No one  
15 comprehends it. They can't see it. So he calls for  
16 the Prophet Daniel. Here I digress. I will get back  
17 to Daniel.

18 Do we see the writing on the wall ourselves?  
19 I wanted to say to the DOE with all due respect and I  
20 am not sure really what respect is due. Look, we have  
21 been at this a long time. We, people of faith and  
22 others, over ten years ago I was here for a similar  
23 DEIS concerning the Stewardship, Stockpile stewardship  
24 program. I kind of just want to say: You guys have no  
25 credibility. None. This is a sham. It's over. The

73/32.04

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1 game is up. This deception, this cover up, this  
 2 perversity, it is an abomination against humanity,  
 3 against the earth and against God. You are planning  
 4 mass murder. Do you not know it is already condemned  
 5 by the Almighty? What will you say to God on the  
 6 judgment day when we, you, me, all of us, will be held  
 7 accountable for this unspeakable sin?

8 Now I know we weren't supposed to address  
 9 anyone personally on the panel but you, Holmes, I asked  
 10 you earlier, I thought isn't it hard to take the  
 11 position of a neutral person and yet still strongly  
 12 feel passionately about something and we talked about  
 13 that a little bit. I just want to follow with one last  
 14 question: What are you facilitating for your own self?

15 As citizens of this land, as members of the  
 16 human family, we are ashamed of our government. The  
 17 DOE and its offspring, the evil Livermore labs. I will  
 18 finish with this quote from another Daniel of our own  
 19 age, Daniel Barrigan, who happens to be commenting on  
 20 this book of Daniel.

21 Daniel now turns his attention to the wall and  
 22 its text. Mene mene, quote. The days of the king are  
 23 numbered, finished. Tekel, he is weighed and found  
 24 wanting.

25 Parsin, his king is divided, given over.

73/32.04  
cont.

1 unquote.

2 The misuse of the Holy vessels is thus a  
 3 symbol of a larger crime, of apostasy, rejection of  
 4 God. True to the message of the book of Daniel, time  
 5 runs out for every empire of human creation including  
 6 the American -- something more is at stake here and the  
 7 theory concerning the rise and fall of imperial states.  
 8 Something more than a catastrophe at hand, an outcome  
 9 rendered inevitable by greed and violence. Something  
 10 more even than the consequence of high crime, a  
 11 judgment countering the presumption that the high and  
 12 mighty stand outside the law of God. Thank you.

13 MR. BROWN: Stephen Kelly and Jo Ann Frisch  
 14 will follow.

15 MR. KELLY: Stephen Kelly, Oakland, human  
 16 being on planet earth 2004. Fear or love? Fear  
 17 nuclear love phasing into green lab. Me or we. Fear  
 18 or love?

19 (Playing of a flute).

20 Survival or thriving, survival -- survival.  
 21 Can we survive as a species? It doesn't help with  
 22 nuclear power, nuclear weapons. Fear or love? The  
 23 choice, we are all on planet earth together this moment  
 24 not knowing.

25 (Playing of the flute).

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1 Let's choose, let's choose to thrive, let's  
 2 love, let's survive, let's live this moment not  
 3 knowing. Thank you.  
 4 MR. BROWN: Jo Ann Frisch is next and then  
 5 Marylla Kelley.  
 6 MS. FRISCH: I am Jo Ann Frisch. I moved to  
 7 Pleasanton in 1970 and I now live in Livermore. I am  
 8 also a member of Tri-Valley Cares which stand for  
 9 Communities Against A Radioactive Environment. Most of  
 10 what I would say has already been said, but I do have  
 11 some -- a quick overview I'd like to read through, a  
 12 few key elements of this site-wide Environmental Impact  
 13 Statement. Storage of nuclear materials. This plan  
 14 will more than double the storage limit for plutonium  
 15 at the Lab. From 1540 pounds to 3300 pounds. It would  
 16 increase the tritium storage limit from 30 grams to 35  
 17 grams. Tri-Valley Cares calls on the DOE to  
 18 deinventory the plutonium and tritium stocks at the  
 19 Lab, not increase them.  
 20 Plutonium atomic vapor laser isotope  
 21 separation, otherwise you can call it plutonium AVLIS.  
 22 This plan will revive a project that was cancelled more  
 23 than ten years ago because it was considered too  
 24 dangerous and unnecessary.  
 25 This SWEIS, this environmental impact

74/08.02

75/27.01,  
01.01

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1 statement calls it the integrated technology project.  
 2 This a scheme to heat and vaporize plutonium and then  
 3 shoot multiple laser beams through the vapor to  
 4 separate out plutonium isotopes. This sounds like  
 5 something from a horror movie to me. To do this the  
 6 Livermore Lab plans to increase the amount of plutonium  
 7 that can be used at one time in any one project from 44  
 8 pounds to 132 pounds. This is a three fold increase.  
 9 Furthermore, the SWEIS states that plutonium  
 10 AVLIS at the Lab will use a feed stock of powdered  
 11 oxides that will first need to undergo processing in a  
 12 furnace. Plutonium atomic vapor laser isotope  
 13 separation is an environmental risk and a nuclear  
 14 proliferation nightmare. Tri-Valley Cares calls for  
 15 cancellation of this project and as an interim measure  
 16 for DOE to include an analysis of its proliferation  
 17 risks in the SWEIS.  
 18 New experiments in the National Ignition  
 19 Facility. This plan will add plutonium, highly  
 20 enriched uranium, and lithium hydride to experiment in  
 21 the National Ignition Facility. Mega laser, it's a  
 22 mega laser. When it is completed at Livermore Lab and  
 23 using these materials in the NIF will increase its  
 24 usefulness for nuclear weapons development.  
 25 MR. BROWN: One minute left.

75/27.01,  
01.01  
cont.

76/26.01

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1 MS. FRISCH: It will also make the NIF more  
 2 hazardous to workers in the environment. Tri-Valley  
 3 Cares calls for a closeout of the NIF project and  
 4 termination of plans to use fissile and fissionable  
 5 materials and lithium hydride in it.  
 6 Tritium target manufacture at the Lab. I  
 7 don't have time to read all of this. This will be the  
 8 manufacture and packing of tritium targets for the NIF  
 9 mega laser. There is a new technologies for plutonium  
 10 pit production. This makes the Livermore Lab the place  
 11 to test new manufacturing technologies for producing  
 12 plutonium pits for nuclear weapons. The pit is the  
 13 softball sized piece of plutonium that sits inside a  
 14 modern nuclear weapon and triggers its thermonuclear  
 15 explosion. I mean, I thought the Cold War was over.  
 16 DOE doesn't think it's over. The scientists at this  
 17 laboratory wants it to continue so that they can  
 18 continue their mad research. Tri-Valley Cares calls  
 19 for termination of this technology development project  
 20 at the Lab. Enhancing readiness to resume full scale  
 21 nuclear tests, we have heard about this today.  
 22 Tri-Valley Cares opposes enhancing US readiness to  
 23 conduct full scale tests. And the final thing that is  
 24 the most near and dear to my heart is this mixing bugs  
 25 and bombs right here in Livermore. BSL 3 it's called,

76/26.01  
cont.

77/34.01

78/37.01

79/39.01

80/35.01

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1 that stands for bio safety lab at the third level.  
 2 It's also called a big warfare agent research facility.  
 3 This is to develop instruments that can tell us what  
 4 kinds of bio weapons we have been hit with and the way  
 5 that they are gonna do that is to -- the DOE proposes  
 6 genetic modification and aerosolizations, that is  
 7 spraying, with live anthrax, plague and other deadly  
 8 pathogens on the site.  
 9 MR. BROWN: If you can submit the remainder of  
 10 your comments in writing. I am sorry, you are about  
 11 two minutes over now.  
 12 MS. FRISCH: Sorry, I waited for several hours  
 13 to get up here.  
 14 SPEAKER: Stephen didn't take up his five  
 15 minutes. Maybe she could take a little more.  
 16 MS. FRISCH: I would like to know what the  
 17 Lab plans to do to protect this immediate community and  
 18 the larger community of the Bay Area in case of an  
 19 accident. They have a history of accidents of all  
 20 kinds -- tritium in the water, plutonium in a nearby  
 21 park found in the soils. I could go on and on and if  
 22 there is an accident with live anthrax or plague, what  
 23 will we do? It won't be 70 years from now before we  
 24 reap the consequences of an accident. We would know it  
 25 pretty quickly. And what kind of preventative is there

80/35.01  
cont.

81/25.04,  
29.01

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1 in this SWEIS in case of an accident? And to believe  
2 there won't be an accident is something I don't want to  
3 play with and you shouldn't be playing with either. I  
4 am outraged at this. The Cold War is over, we do not  
5 need these things to protect and to keep our stockpiles  
6 safe while it is being dismantled. This is to use much  
7 needed money that should be used in other places so  
8 that we can continue a Cold War mentality of new  
9 nuclear weapons, more usable nuclear weapons and it  
10 puts us all at dire risk. Thank you.

81/25.04,  
29.01  
cont.

11 MR. BROWN: Thanks. Maryllia Kelley is next to  
12 be followed by Loulena Miles. When I am giving you  
13 warnings I am not trying to cut you off but we do have  
14 fifteen speakers remaining who have waited just as long  
15 and I am simply trying to allow them the same courtesy  
16 and the privilege that other people had. So thank you.

82/03.01

17 MS. KELLEY: I am Maryllia Kelley, executive  
18 director of Tri-Valley Cares in Livermore. I live on  
19 East Avenue in Livermore and have lived in Livermore  
20 since 1976. I am not going to repeat my comments of  
21 this morning, but I am going to add a detail in a  
22 couple of areas and again we will submit more detailed  
23 written comments as well.

24 Folks in the audience may not know that on  
25 April 12th, this month, the Defense Nuclear Facility

83/25.07

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1 Safety Board sent a letter to the head of the National  
2 Nuclear Security Administration, the part of DOE that  
3 is doing this site-wide EIS insisting that the NNSA  
4 explain to them why they are downgrading safety in the  
5 plutonium facility at Livermore Lab and this is based  
6 on a inspection and investigation by the DNFSB that  
7 occurred last month and I just want to read a couple of  
8 things. And this has to do with the accident analysis  
9 and I will just say up front I have read the accident  
10 analysis and the draft site-wide Environmental Impact  
11 Statement and it appears to contain the same  
12 assumptions that the DNFSB is about to weigh in on.  
13 The DNFSB reviewed the leak path factor. Leak path  
14 factor means what is going to get out of the building  
15 in an accident. What are the consequences going to be?  
16 And they discussed it in detail it says with its  
17 authors and Livermore Lab representatives and they  
18 found a number of things they called the analysis and  
19 its assumptions unrealistic and inconsistent with  
20 authorization basis documents and facility procedures.  
21 They found, for example, in the way the Livermore Lab  
22 models for accidents that they forgot to include the  
23 radioactivity that would go out the doors when the  
24 employees escape through the emergency exits, so when  
25 you look in the site-wide EIS and some of you guys saw

83/25.07  
cont.

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1 the view graphs and they say well okay, even in a bad  
2 accident, hardly any radiation will get out, it is  
3 because they forgot to model what happens when the  
4 employees leave and by the way having employees leave  
5 after an accident is a good thing. So they need to  
6 take that into account. The calculations according to  
7 the Defense Nuclear Facility Safety Board are based on  
8 simply acute scenarios, that is what happens in the  
9 course of a fire that lasts 30 minutes. In the SWEIS  
10 there is one that lasts an hour and the couple hours  
11 after that what the Defense Nuclear Facility Safety  
12 Board says what about all of the radiation that leaks  
13 out in the days that follow. They are not part of the  
14 calculations. So of course they didn't find any  
15 consequences, they simply stopped modeling after a  
16 couple of hours.

83/25.07  
cont.

17 Third, they found that the computer program  
18 manual used to calculate this leak path factor, it's  
19 called contain, has cautionary notes with regard to its  
20 use for modelling. The notes recommend performing  
21 sensitivity analyses on important input parameters. In  
22 other words, it warns against garbage in, garbage out.  
23 Well, the Defense Nuclear Facility Safety Board found  
24 that the Lab had not done these sensitivity analyses  
25 and therefore they don't know if they are getting

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1 garbage out and I would suggest we saw the view graphs  
2 and that was garbage out.  
3 As I said the site-wide EIS has these same  
4 assumptions. It has the same five percent leak path  
5 factor that the Defense Nuclear Facility Board said was  
6 unrealistic. Therefore, the Department of Energy must  
7 go back and recalculate all of those accidents  
8 scenarios and again, recirculate the document for  
9 public comment so that we can see how they have been  
10 redone before finalizing the document.

83/25.07  
cont.

11 MR. BROWN: If you can make your remaining  
12 points in the next minute.

13 MS. KELLEY: I will.

14 MR. BROWN: Okay thanks.

15 MS. KELLEY: I want to add something to the  
16 comments that I and others have already made on the  
17 proposal to revive the plutonium atomic vapor laser  
18 isotope separation program. I will talk really fast  
19 and I get extra points for saying it all. I was part  
20 of that effort to stop that program in 1990 in the late  
21 '80's and in 1990 when we stopped it. You may recall  
22 that a number of groups threaten to sue if the  
23 Livermore Lab ran plutonium in the engineering  
24 demonstration system without doing an environmental  
25 impact statement. You may recall that the

84/27.01

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1 Department of Energy said okay we will do one before we  
 2 run plutonium in that system. You may recall that you  
 3 even scoped that environmental impact statement and  
 4 then Admiral Watkins cancelled the project before  
 5 plutonium was run in the engineering demonstration  
 6 system so it had been our belief based on the law,  
 7 based on NEPA that no plutonium had ever been run in  
 8 that engineering demonstration system. There has been  
 9 no NEPA review with public participation. Imagine our  
 10 surprise when we are reading the draft site-wide  
 11 Environmental Impact Statement and we find they have  
 12 decided to run plutonium in that engineering  
 13 demonstration hardware. What NEPA document? It just  
 14 calls it a generic NEPA review. Is it a memo to file  
 15 which can be a single page long? What was the public  
 16 participation? Well, that document appears to be  
 17 classified or UCNL, unclassified controlled nuclear  
 18 information, so we asked to look at it. How adequate  
 19 was that analysis? Was that an illegal operation. We  
 20 believe it may have been but we wanted to at least  
 21 check the adequacy of the NEPA review. We were refused  
 22 that document. We FOIA'd it, used the Freedom of  
 23 Information Act. It still hasn't come. I believe that  
 24 you are out of compliance with the law right now,  
 25 today, and we want to see that document right away.

84/27.01  
 cont.

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1 Thank you.  
 2 MR. BROWN: Once again the court reporter is  
 3 asking if we can take just a brief break for him to  
 4 have his fingers recover. We don't want to miss any  
 5 record, so we will take a maybe about a seven minute  
 6 break or so and we should be able to wrap things up as  
 7 soon as we reconvene. Sorry about that.

8 (Short recess)

9 MR. BROWN: Loulena Miles is next. Maybe she  
 10 is still out in the hallway.

11 MS. BARBER: My name is Rechael Barber. I  
 12 have lived in the Bay Area most of my life. I am  
 13 speaking, I am not affiliated with any groups. I am  
 14 speaking on my own behalf. I have a few questions I  
 15 have from my own notes and also I have some information  
 16 that Loulena Miles provided to me, she is an attorney  
 17 with Tri-Valley Cares.

18 First, there are a few points that were  
 19 addressed at the beginning of the hearing about first  
 20 of all that the plutonium will be secured in vaults and  
 21 I have a note here that the containers, about the  
 22 containers that it will be secured in, that in March of  
 23 this year DOE filed a formal request to approve a new  
 24 single walled shipping container for radioactive  
 25 transport and it will be a year before the Nuclear

85/20.05

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1 Regulatory Commission is expected to make a decision on  
2 this and the SWEIS states that the plutonium will be  
3 shipped in accordance with applicable NRC standards and  
4 the DOE -- what I wanted to know about that is that  
5 once that decision is made, once, if it is approved,  
6 how long will it take before it will be in effect and  
7 how effective are these containers and also about the  
8 demolition of the older facilities, how dangerous is  
9 that and how will that increase exposure to the people  
10 that live around the area -- about the worker exposure,  
11 that it will be quote low, how is that measured, what  
12 is being done to minimize the exposure to the workers  
13 and how will their families be affected when they bring  
14 that exposure home, like is there radioactive energy  
15 that they are carrying home to their children and what  
16 if there is like a woman who is pregnant who is  
17 bringing this home, how is that affecting her unborn  
18 child?

85/20.05  
cont.

86/23.02

19 Also, something that Mr. Grim spoke on was  
20 that no valuable minerals will be destroyed underneath  
21 the Lab and I am just wondering what is it that makes  
22 one part of this planet more valuable than another part  
23 of this planet? How is it, what, just because we can't  
24 make money off of it? I am just wondering is that  
25 where that statement's coming from?

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1 And the endangered species loss will be low  
2 and I don't see how that's positive because how is any  
3 loss of endangered species okay?  
4 And that the latent cancer level, the latent  
5 cancer will be low and I have a note here: Plutonium,  
6 when inhaled, just a few micrograms of plutonium, when  
7 inhaled, a very microscopic amount is likely to develop  
8 fatal lung cancer as some of the cells damaged by alpha  
9 radiation begin to multiply uncontrollably so I don't  
10 see how the cancer level is that low if that small of  
11 an amount is breathed in, it could be potentially  
12 fatal.

87/16.02

88/23.01

13 MR. BROWN: One minute remaining.  
14 MS. BARBER: Okay. Oh, one of the things that  
15 I wanted to talk about was that plutonium, I believe,  
16 is derived from uranium and I wondered how is the  
17 uranium mining affecting the communities where it's  
18 being mined. I lived on a Navajo reservation and I was  
19 active in, I was active in supporting the Big Mountain  
20 Coalition in Arizona and I witnessed myself the  
21 evacuation of the people who have been staying on their  
22 land there for many, many generations, our federal  
23 government was forcing people to sign a 75 year lease  
24 that they would leave the land after a 75 year period  
25 and all their life stock is being taken, they are being

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1 put into tract housing, given a block of cheese and  
2 being forced to work for companies like Peabody Coal,  
3 who are also damaging the land in taking coal out of  
4 the land and polluting our environment.

5 So, that is all I have to say right now.  
6 Thank you.

7 MR. BROWN: Thank you. Chris Dunn is next.  
8 Stephanie Ericson is after Chris. I am sorry, is Chris  
9 here? Okay, Stephanie Ericson. Okay. Somebody is  
10 sprinting towards the front. You have remarkable  
11 energy for this late at night. And Dale Nesbitt will  
12 follow Stephanie.

13 MS. ERICSON: He just left.

14 MR. BROWN: Did he have a statement?

15 MS. ERICSON: I don't have it. I hope he will  
16 submit it. He had to get up at 5:00 o'clock tomorrow  
17 morning so it is a little too late for him.

18 I have to say that every time I hear of a new  
19 weapons plan put forth by DOE and the Livermore Lab it  
20 never fails to remind me of Walt Kelly's comic strip  
21 character Pogo of years ago and his conclusion: We  
22 have met the enemy and it is us. However, I have to  
23 say that we in the community of Livermore Valley are  
24 not the enemy nor are other peoples on our precious  
25 earth the enemy yet we may all pay a price for this

89/04.01

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1 dangerous course of ramping up nuclear weapons work at  
2 Livermore Lab and other DOE sites and now also adding  
3 research and bio warfare agents to the mix. Why is it  
4 that so many programs justified on national security  
5 grounds make me feel insecure and vulnerable. Our real  
6 enemies are the goal of never ending and ever  
7 increasing nuclear domination and the inevitable  
8 response of other nations and groups to our hypocrisy  
9 of more nukes for us while we point fingers at weapons  
10 of mass destruction real or imagined elsewhere.

11 My concern about DOE's ten year plan for the  
12 Livermore Lab are both global and local. I am  
13 concerned about the increased amount of plutonium that  
14 this plan would permit at the Lab because it increases  
15 opportunity for greater plutonium emissions into our  
16 community. Since 1960 there have been at least 30  
17 releases of plutonium, uranium and other radioactive  
18 substances at the Lab. There have been fires, spills,  
19 filter failures, leaks and criticality accidents. In  
20 addition plutonium contaminated sewage has been  
21 discharged into Livermore's waste water treatment plant  
22 and liquids with plutonium poured on to the ground.  
23 Plutonium in unlined liquid waste pits leached into the  
24 soil and some may have been swept into the atmosphere  
25 after evaporation. In a 1996 report found that the

89/04.01  
cont.

90/33.01

91/23.01

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1 Livermore Lab could not account for 12 pounds of  
2 plutonium possibly due to spills, releases and/or  
3 measurement errors. We also know that elevated levels  
4 of plutonium have been found in Big Trees Park in  
5 Livermore with no definitive explanation for how it got  
6 there. Some theories yes but no real answers. It  
7 therefore seems irresponsible to let the Lab have even  
8 more plutonium and all the more so when you consider  
9 its purpose, to introduce new nuclear weapons  
10 technologies here.

91/23.01  
cont.

11 P AVLIS, as mentioned before, atomic vapor  
12 laser isolation separation, this was previously  
13 proposed. I didn't realize for plutonium but I know  
14 later for uranium isotope separation and then abandoned  
15 for that too I believe because of environmental  
16 concerns however this new plan will use 220 pounds of  
17 plutonium each year increasing air pollution and  
18 increasing the stream of transuranic waste, that is  
19 stuff like plutonium and uranium at the Lab to over 20  
20 times current levels.

92/27.01

21 Another project already been mentioned by  
22 others, plutonium pit manufacturing. Again this adds  
23 risk to the community for something that is not needed  
24 to maintain the current nuclear weapons stockpile.  
25 These programs are also directly linked to the intent

93/37.01

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1 by the Bush administration to develop new nuclear  
2 weapons such as the robust nuclear earth penetrator and  
3 the so-called mini nukes. I guess the idea for mini  
4 nukes is to make them seem small enough and maybe even  
5 cute so that it becomes thinkable to use them. It is  
6 like how could a mini nuke be that bad, right?

94/01.01

7 Eventually the DOE plans to construct  
8 somewhere, we don't know where yet, a modern pit  
9 facility to have the capability if it ran double shifts  
10 to each year produce 900 pits an amount that I  
11 understand is equal to the entire nuclear arsenal of  
12 France and China combined.

93/37.01  
cont.

13 The purpose of the Livermore pit facilities to  
14 work out the bugs of the new plutonium pit  
15 manufacturing technology prior to large scale  
16 fabrication elsewhere.

17 MR. BROWN: One minute less.

18 MS ERICSON: I will try to talk even faster.  
19 While the Lab is working out these bugs it will become  
20 host of bugs of another sort as we already heard.  
21 DOE's proposal to bring bio warfare agent research to  
22 Livermore strikes me as especially wrong headed. The  
23 proposed BSL 3 facility here would allow research on  
24 agents for potential for airborne transmission that can  
25 be deadly if untreated, anthrax, botulism, Bubonic

95/35.01

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1 plaque. Not only am I concerned about the impact of  
 2 potential accidents with these agents in a heavily  
 3 populated area such as ours but also about the message  
 4 we would send to other nations and groups that the US  
 5 chooses to do this kind of politically sensitive  
 6 research in a super secret nuclear facility whose  
 7 primary mission is military research. The line between  
 8 defensive and offensive research in this area is very  
 9 thin. By doing it in a classified site like this,  
 10 directs tremendous obstacles to oversight both  
 11 domestically and internationally. Even if the Bush  
 12 administration hadn't lowered US credibility with false  
 13 assertions about definitive evidence of weapons of mass  
 14 destruction in Iraq, do we really expect that, don't  
 15 worry, just trust us will cut it on this? I don't  
 16 think so. It seems to me that this is a recipe for  
 17 disaster. That as a nation we are leading by  
 18 misexample. I would ask the DOE that it more  
 19 seriously consider the local health and environmental  
 20 impacts of these and the other new or expanded proposed  
 21 programs and in addition that it undertake a rigorous  
 22 review of these programs' potential proliferation  
 23 impact the weapons of mass destruction and I would ask  
 24 that such a review include the assessments of  
 25 independent experts who are not connected with DOE by

96/25.04

97/01.01

98/25.05

97/01.01  
cont.

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1 employment, collaborative work or past affiliation.  
 2 Thank you very much.  
 3 MR. BROWN: Thanks. AL Sandine. Gordon  
 4 Schultz. And after Gordon, Michael Ender.  
 5 SPEAKER: Since 1975 the Lawrence Livermore  
 6 National Laboratory has been providing very excellent  
 7 full-time jobs for people with mental retardation.  
 8 Currently the Laboratory has about 30 people with  
 9 developmental disabilities and very significant  
 10 learning disabilities and they contract with the agency  
 11 that I run. I am executive director for AID Employment  
 12 and in the midst of all the other things that the  
 13 laboratory has done and is doing, one of the things  
 14 that they very quietly do without bringing attention to  
 15 it, without asking for a claim or recognition, is very  
 16 quietly integrating people with developmental  
 17 disabilities into their work force changing their  
 18 lives, providing them with not only income but with a  
 19 meaning in life. They are included into the work  
 20 force. They are fully integrated and become part of  
 21 that society and I don't know if you know anything  
 22 about that population but back in 1975 when this  
 23 program was started by the Livermore Lab, people with  
 24 developmental disabilities were relegated to sheltered  
 25 workshops and were expected to stay in there and you

99/15.01

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1 know just kind of behave. The Livermore Lab saw a  
2 potential that few people in the rest of the country  
3 saw and have brought these people in collaboration with  
4 a nonprofit agency, our nonprofit agency, employment  
5 into the work force and the Laboratory received  
6 national and state awards for this program and I think  
7 it is something that people should be aware of. Thank  
8 you to Livermore Lab and DOE.

99/15.01  
cont.

9 MR. BROWN: Thank you. Okay. Michael Ender  
10 and Vernon Brechin is afterwards.

11 MR. ENDER: Good evening. My name is Michael  
12 Ender. I am a parent, soon to be a grand parent  
13 through marriage and also a member of a faith  
14 community, also a graduate student in philosophy at  
15 Graduate Theological Union and I have been grappling  
16 with a couple of problems over the last couple of years  
17 having to do with State and society and their relation  
18 and also the ethical community and I want to say first  
19 of all that, before I go any further, that I oppose any  
20 increase in nuclear weapons design and manufacture at  
21 the Lab and I call upon the DOE to analyze conversion  
22 of the Lab to peaceful purposes. I just want to say  
23 that before I went any further.

100/04.01,  
07.01

24 But in struggling with the ethical community,  
25 that is why I say, I am a member of a faith community

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1 but also of a larger community in the sense that I feel  
2 like or not feel but I have reason to a point where I  
3 am convinced that we have a responsibility beyond a  
4 responsibility to our families and to ourselves, but to  
5 a larger community and I think that there is a very  
6 ethical community that gathered here today because  
7 taking time out from your busy schedules, from your  
8 work, and I also want to thank the DOE for having these  
9 hearings and for your public service and that's what I  
10 think the sign of maturity and ethica is, is a kind  
11 of -- is a public service, a public -- you are seeking  
12 a public good beyond an individual good and I have  
13 become convinced that the good that a government grants  
14 its people is freedom in the sense that, and freedom is  
15 a word that I have really come to believe is totally  
16 almost completely misused; but, I believe that it has  
17 to do with making an intelligent choice to obey  
18 intelligent laws and I think that the intelligence  
19 comes --

20 Intelligence is another question that I have  
21 been grappling with. I apologize if I am a little  
22 disorganized. I only found out about the hearing  
23 yesterday kind of by accident and I tried to keep  
24 informed. I listen to the news every day. Hours of  
25 news everyday and just by accident I heard about this

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1 hearing and it seems to me I would also like to ask  
 2 that there be more hearings, a lot more hearings,  
 3 because I think that for people to make an intelligent  
 4 decision and for you to make an intelligent decision 101/31.02  
 5 and come up with an intelligent plan, a reasonable  
 6 plan, you have to incorporate the reason of many, many,  
 7 many people and it seems to me that I am concerned,  
 8 like I have been thinking about the FCC hearings when  
 9 they wanted to make some changes in the regulations  
 10 there where there was only a few hearings scheduled and  
 11 one of the commissioners asked for more and the more  
 12 hearings they had, the more people they were able to  
 13 hear from, were really opposed to the changes proposed.  
 14 So I think for us to really have an intelligent policy,  
 15 we have to include more voices and I think that --  
 16 well, I want to say as --  
 17 MR. BROWN: Just about a minute left.  
 18 MR. ENDER: Okay. I will try to wrap it up.  
 19 I also -- okay, I have several points but I will take  
 20 just 45 seconds to say that I think that, you know, one  
 21 of the problems I have really been grappling with is  
 22 science and knowledge and what is science? And it  
 23 seems to me that, I mean for a long time I have been  
 24 trying to figure out this philosophy of science and it  
 25 seems to me that it is possible to have a very, very

1 convincing argument but still you can have a convincing  
 2 argument on the other side and so you know, what you  
 3 are proposing makes sense in a certain way; but, I  
 4 think it is leaving out a kind of common good. I guess  
 5 I will just wrap up by saying that, like, for example,  
 6 you know, you can have a global warming. You can have  
 7 a debate, you know, and you can have a very large  
 8 consensus of scientists around the world saying that,  
 9 you know, this is really a problem and then you can  
 10 have some scientists come along and say no, this isn't  
 11 a problem. It is not really good science.  
 12 I will just conclude by saying that I don't  
 13 understand, really, actually, why it is the  
 14 Department of Energy that is here today and why it's --  
 15 because we are talking about weapons -- nuclear, well,  
 16 weapons and nuclear weapons proliferation and it just  
 17 seems to me that the one, the one purpose of government  
 18 that I am sure of is that it's to protect its citizens  
 19 and I don't think that, even if you could make these,  
 20 these weapons safe for the people who work in and even  
 21 for this area, I don't think they are going to make --  
 22 it is not going to make the world safer. I don't  
 23 think, you know, it was Einstein that said you can't,  
 24 you know, work for peace and war at the same time and  
 25 so I just think that -- and it really, A J Musky says:

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1 There is no way to peace. Peace is the way and I  
2 really would encourage you to try to have more  
3 hearings, take more of the people's voices into  
4 consideration, people who care about peace, people who  
5 care about the ethical community, thank you.

101/31.02  
cont.

6 MR. BROWN: Thank you. Vernon Brechin. And I  
7 think Ben Louder is next.

8 MR. BRECHIN: My name's Vernon Brechin and I  
9 am a member of Tri-Valley Cares but I am basically  
10 speaking for myself. I think my awakening started as a  
11 young kid early in elementary school when I went  
12 through the duck and cover drills and even then I think  
13 I felt like I was part of a pawn in a propaqanda thing.

14 Later on I enlisted in the Air Force. 1971 I  
15 maintained a large antiquated trouble prone computer  
16 which could play a role in launching nuclear weapons.  
17 Then I began to -- and I heard about accidents that  
18 weren't told to the public that dealt with nuclear  
19 weapons and things like that and I began to think:  
20 Maybe I should put my caution not so much in the  
21 Soviet Union, but in those people who convinced  
22 themselves that they were working on behalf of life,  
23 liberty and the pursuit of happiness -- these people, I  
24 thought, maybe they are the greatest threat.

25 Anyway, I will do my prepared statement now.

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1 Thank you for this opportunity to comment on the  
2 Lawrence Livermore National Lab EIS, which I will call  
3 the SWSPEIS. Most reviewers would find it impossible  
4 to comprehensively review the summary booklet and three  
5 volumes within the allotted comment period. My  
6 comments will cover less than one percent of the issues  
7 presented in this multiple component EIS document. As  
8 I expected, I ran across many examples of the fine art  
9 of omission. Here are just a couple of them. Clearly,  
10 the primary driving factor behind this plan is existing  
11 administration policy. At the end of section 161 it  
12 states: That scoping comments requested that the  
13 SWSPEIS should address Lawrence Livermore activities at  
14 other sites, ie, nuclear weapons activities at the  
15 Nevada Test Site. Then it states: These alternatives  
16 were considered unreasonable. Perhaps that response is  
17 related to an estimated 7.29 trillion dollars of  
18 environmental damage that was rendered to the  
19 underground nuclear explosion testing portions of the  
20 Nevada Test Site. Here is the DOE document that  
21 contains the figure, 7.29 trillion dollars. Very few  
22 people have heard about this.

102/31.02

103/07.02

23 Most of these tests were performed under the  
24 sponsorship of Lawrence Livermore National Lab and Los  
25 Alamos National Lab. If the present administration has

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1 its way, this lab will likely resume full scale testing  
2 at the Nevada Test Site. This SWSPEIS needs to address  
3 all aspects of the Lab's impact on our environment. I  
4 also noticed some omissions that anyone with a basic  
5 understanding of nuclear fission technology should have  
6 seen. It appears in a appendix M, the NIF portion  
7 under section M 53131, radio nucleoid I had materials  
8 management --

9 MR. BROWN: If you can make your point in the  
10 remaining minute, thanks.

11 MR. BRECHIN: Okay. Table M 53131.2 titled  
12 estimated maximum mobilizable radio nucleoid  
13 inventories proposed action is very poorly formatted  
14 and is missing large numbers of figures product radio  
15 nucleoids. Many of those missing radio nucleoids can  
16 be extremely harmful if released into the general  
17 environment. These include key radio isotopes such as  
18 cesium 137 and stronium 90. This type of omission  
19 needs to be rectified in many of the SWEIS tables and  
20 the public deserves an explanation as to why these were  
21 omitted and how these omissions damage the impact  
22 analysis that was performed. I urged the selection of  
23 the reduced operational alternative though it fails to  
24 address our nation's addiction with nuclear weapons of  
25 mass destruction and this alternative fails to comply

103/07.02  
cont.

104/26.05

105/06.01

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1 with the overwhelming sentiment of members of the  
2 public that commented on the scope of the plant, EIS  
3 plans. I will provide further comments later. I hope  
4 you will take these and other public comments  
5 seriously, even if it requires the creation of a new  
6 series of EIS's or a change of existing policy. Thank  
7 you again.

8 MR. BROWN: Ben Louder. Has been here?  
9 Michael Velluva. Okay. Michael is here and Phoebe  
10 Sorgen is here. You will be next.

11 MR. VEILOVA: My name is Mike Velluva and I am  
12 counsel to the Western States Legal Foundation and I  
13 want to just address two basic points. I will give a  
14 little background, our organization represented  
15 Tri-Valley Cares in the 1988 lawsuit, it is hard to  
16 believe it was 16 years ago, which sued the University  
17 of California which had produced an environmental  
18 impact report that was about 1/50 the size of the  
19 current environmental impact statement. As a result of  
20 the settlement of that case, we went to the next level,  
21 which was the 1992 combination EIS/EIR. So that's our  
22 background into this and over the years we have been  
23 involved in a number of administrative and legal  
24 proceedings involving this.

25 So, in part, we are to blame for what we are

105/06.01  
cont.

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1 doing now. Yeah, right. The 1992 EIS gave us a couple  
2 of statements which have stayed with us ever since and  
3 are indicative of the conundrum we face. One is when  
4 we were asked about the alternative of disarmament. We  
5 were told disarmament is too speculative to consider as  
6 a realistic alternative. That was quote number one.

106/01.03

7 The other one I remember is that there are no  
8 cultural resources of significance in the Livermore  
9 region which has to be a dis, I am sorry. There are  
10 always macro and micro issues with any NEPA analysis  
11 and unfortunately NEPA is an imperfect and crabbed way  
12 of looking at the ongoing problems associated with the  
13 operation of the Livermore Labs. We are not supposed  
14 to talk about policies issues. It is hard to talk  
15 about the interrelationship of this Lab with the rest  
16 of the weapons complex of which Lawrence Livermore is  
17 only a part but we do what we can. That is why so many  
18 of the comments from a NEPA perspective don't really  
19 fit but they do fit because this is the only forum we  
20 have and so we have to say what we're saying because  
21 the way these decisions are made, nobody has any other  
22 really outlet for many of the feelings and opinions  
23 that they have. So this is for a very important  
24 process for the public.

25 The problem that this environmental impact | 107/07.03

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1 statement shares with the 1992 statement is that we are  
2 only looking at incremental impacts from changes in an  
3 ongoing project rather than a new project so we have,  
4 well, ten percent expansion here versus ten percent  
5 retraction and then a no action alternative which an  
6 earlier speaker aptly pointed out was actually lots of  
7 action but it just happened to be the status quo. The  
8 way that might expand the analysis to a point where we  
9 can then truly reflect on its impacts would be: Well,  
10 what would the Bay Area, the community, the environment  
11 look like without the Lab? Let's take that as the zero  
12 baseline and work from there rather than an ongoing  
13 project.

107/07.03  
cont.

14 MR. BROWN: One minute left.

15 MR. VEILOVA: Oh, jeez. Okay. In 1988 we saw  
16 the camel's nose with some of these projects. In 1992  
17 and now we're getting to see the hump. Why not on the  
18 upside of the alternative show us the whole camel. How  
19 much ultimately is going to come in in the form of  
20 plutonium? What is the weapons facility going to look  
21 like in ten or fifteen years? You tell us five years,  
22 maybe two years, but given the promises the community  
23 has been told over the years, well, we are really not  
24 going to run plutonium through AVLIS, we promise no new  
25 weapons systems are going to be developed here and then

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1 we see that is what we are stuck with.  
2 If I were a developer and I came before  
3 Alameda County or the City of Livermore and I was going  
4 to build a commercial facility and I told them well I  
5 am to conduct bio weapons experiments, I will bring in  
6 1500 kilograms of plutonium and study simulated weapons  
7 effects, I swear to you the impact statement before  
8 they laugh me out of the City Council, would look a lot  
9 different.

10 Economists call it zero based budgeting. I  
11 think the EIS has to start from a zero base. There is | 108/07.03  
12 so much more I can say, you will see our written  
13 comment and hopefully it will be given the attention  
14 that -- well, more than it has in the past. I have to  
15 say that, so thank you for your time. I appreciate  
16 this, I appreciate the fact you are doing an EIS,  
17 although I don't know why it was ten years instead of | 109/31.02  
18 five years, but there it is. Thanks.

19 MR. BROWN: Thanks very much. Phoebe.

20 MS. SORGEN: I am Phoebe Ann Thomas Sorgen. I  
21 am a peace and justice commissioner for the City of  
22 Berkeley but I am speaking tonight representing the  
23 social justice committee of my church the Berkeley  
24 Fellowship Of You Use and I am also representing my  
25 kids, my kids friend and their families or many of

1 them. We are less than 50 miles away. That is too  
2 close to this. I especially want to thank the speakers  
3 and the organizers for tonight. It is most important  
4 that you are here. It is a sacred act. It is probably  
5 one of the most important things you can do today and I  
6 studied radiology for two years to be registered as a  
7 health care provider. I earned a Bachelor of Science  
8 Degree in biology and the last credit that I needed to  
9 graduate was a physics credit. I took it and it was a  
10 senior level course for physics majors titled: The  
11 Impact Of The Nuclear Age on Society. This was at the  
12 University of North Carolina, taught by a Ph.D. a  
13 nuclear physicist and I was flabbergasted by what I  
14 learned about plutonium and the whole nuclear shebang  
15 and it really seemed like a miracle that we are still  
16 here today. There have been so many close calls.

17 In 1984 I gave a year of my life to the  
18 nuclear weapons freeze and I have to say it was one of  
19 the best years of my life. It kind of lifted this  
20 black nuclear cloud that I had been carrying around and  
21 I highly recommend going door to door talking to  
22 strangers about something that you feel passionately  
23 about. It was a very large movement and of course the  
24 Cold War later ended. The World Court ruled in 1996  
25 that nuclear weapons are illegal. We are now thumbing | 110/01.01

110/01.01

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1 our nose at international law -- we, the Bush  
 2 administration, the US government. We are thumbing our  
 3 nose at the world. We are thumbing our nose at  
 4 safety. What happened to that peace dividend. 9/11?  
 5 The robust earth penetrator would not have prevented  
 6 9/11. And yeah, and star wars, that whole -- the  
 7 national missile defense. It is offensive. It  
 8 wouldn't have prevented 9/11. It doesn't make us safer  
 9 at all. On the contrary. Unilateral preemptive  
 10 strikes infuriate the world and recruit more  
 11 terrorists. The Pentagon said just a couple years ago  
 12 that, one study, a 15 percent Pentagon cut would not  
 13 make us less safe, cutting the budget, and that is what  
 14 it would take to end world hunger. If we ended world  
 15 hunger, nobody would want to bomb us. We would be the  
 16 heroes of the world. The Nuclear Posture Review is  
 17 illegal and immoral and it does not increase safety.  
 18 It makes us less safe. It will fuel a new arms race  
 19 and these proposals for Livermore will fuel a new, a  
 20 renewed arms race and make us less safe by enraging  
 21 even our Allies. It is ultimately a plan that is  
 22 suicidal for our species. That is the large picture.  
 23 A smaller picture involves highway accidents,  
 24 earthquake, maybe a plane accident or a plane  
 25 intentionally crashed into the Livermore Lab and on the

110/01.01  
cont.

111/02.01

110/01.01  
cont.

112/25.01

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1 micro level it includes cancers resulting from the  
 2 inevitable toxic leaks. Accidents happen. My dad has  
 3 two kinds of cancer right now. My mom had two kinds of  
 4 cancer, my best friend had cancer, my step daughter's  
 5 mom has cancer and now my husband has cancer and my  
 6 next-door neighbor died of lung cancer though she  
 7 didn't smoke. So I wondered way back when in college,  
 8 I learned that one spec of plutonium inhaled will cause  
 9 lung cancer. Half of the men alive today will have  
 10 cancer some time in their lives and one-third of the  
 11 women continuing at the rates.  
 12 MR. BROWN: One minute remaining.  
 13 MS SORGEN: I stock potassium iodide for my  
 14 family and I suggest you do as well. I also stock a  
 15 lot of painkillers and I suggest that you do. Helen  
 16 Caldecot and Daniel Elsberg have both said that we are  
 17 closer to nuclear Holocaust than ever in history and  
 18 Daniel Elsberg has described that as hell, as you heard  
 19 the description of the Holocaust survivor, that is what  
 20 we could go through. But don't just prepare for it and  
 21 despair, I am asking you all to keep fighting in  
 22 whatever way you can, keep struggling against this. I  
 23 thank Tri-Valley Cares, you are my heroes, whistle  
 24 blowers are my heroes, saboteurs are my heroes and you  
 25 who work for the Lab, you are in a privileged position.

112/25.01  
cont.

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1 You could become heroes, heroes to the world. You  
2 would be very proud of what you do for the rest of your  
3 life. You are here for a reason hearing this. It is  
4 not easy to hear this. It is not easy for me to hear  
5 it, to think about it. The reason why the hundreds and  
6 thousands of people are not taking to the streets over  
7 this besides the crack down of the corporate media that  
8 the word just isn't out, it is too hard for the people  
9 to think about. They can't face it, but if people knew  
10 they could face it, then we would put a stop to this.  
11 There would be a general strike. We would strike every  
12 first Friday of the month and then every single Friday  
13 and there would be a general strike if people could  
14 psychologically face, it is ridiculous. Our destiny as  
15 a species as the smartest species ever in existence on  
16 this planet our destiny is to create world peace to end  
17 world hunger to create a world that is just and fair  
18 for everybody that is safe for everybody and we where  
19 creativity flourishes. That's what we can do. And we  
20 can do it with creativity. The thing is to engage  
21 people through -- by celebrating the life and the humor  
22 and the beauty and the art and I love the ones who came  
23 in the weapons inspector costumes. Thank you.  
24 MR. BROWN: Wrap things up. Patrice Sutton.  
25 MS. SUTTON: Well, thank you. I am Patrice

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1 Sutton and I work in public health and it seems like  
2 just yesterday that I stood here to voice my concern  
3 about the Lab's last EIS absent then and again now ten  
4 years later is a true accounting of the Environmental  
5 Health Impacts of the Lab's activities and as part of  
6 our global legacy of the Lab's activities one observer  
7 Dr. Bernard Laund who was the co-President, a former  
8 co-President of the International Physicians for the  
9 Prevention of Nuclear War has likened that legacy to a  
10 radiological warfare that has been waged against  
11 unsuspecting populations and I think we need to -- and  
12 actually the IPPNW won the Nobel Prize for peace and I  
13 think that that is kind of the context that we are back  
14 in even more so as the other people have talked about.  
15 Absent from this EIS is a real accounting but in its  
16 place are statistics and assumptions that have been  
17 contrived, sterilized and ostracized from the truth of  
18 what it means to do this work in this place at this  
19 time.  
20 Locally for the past decade as a Board member  
21 of Western States Legal Foundation, particularly, I  
22 have written countless comments and spoken so many  
23 words about the Lab, which is the Superfund site, the  
24 environmental activities that it is really hard to know  
25 where to begin but I am compelled to try because to be

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1 silent would be a betrayal of the forget me not's I saw  
2 last weekend on a nearby hill while hiking. There is  
3 still much to be grateful for on our planet and nuclear  
4 weapons dreamed up and designed and soon to be  
5 constructed here are the enemy of all things beautiful.  
6 As the President of the World Court said on the  
7 occasion of the court's declaration that nuclear  
8 weapons are -- that nuclear weapons, the threat of use  
9 of nuclear weapons is illegal, he said that the very  
10 nature of this blind weapon has a destabilizing effect  
11 on humanitarian law which regulates discernment of the  
12 type of weapon used. Nuclear weapons, the ultimate  
13 evil, destabilized humanitarian law which is the law of  
14 the lesser evil, not to mention their long-term effects  
15 of damage to the human environment in respect to which  
16 the right to life can be exercised.

113/01.01

17 So, for the record, once again, the Lab's  
18 activities have put tritium in the air, plutonium in  
19 Livermore parks and at school in its backyards and all  
20 around town and I would add that the  
21 Department of Energy spent 97 million dollars between  
22 1990 and '97 fending off lawsuits filed by workers and  
23 citizens relating to just such responsible nuclear  
24 weapons production activities. It seems likely that  
25 even among the most egregious corporate polluters the

114/23.01

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1 penalty for such profane Stewardship would not be more  
2 plutonium and tritium coming here. So we are doubling  
3 the plutonium, we are increasing the amount of tritium  
4 and they are even going to let them vaporize the  
5 plutonium this time because I guess the sludge wasn't  
6 quite the best dissemination model for getting  
7 plutonium around town.

114/23.01  
cont.

8 There needs to be a drastically reduced  
9 operation alternative. The one that begins with the  
10 United States legal commitment to abolish, not take off  
11 the shelf and polish their new nuclear weapons which is  
12 what this plan is willing to do and I wanted to just  
13 read a quote from that was in this Sunday's Chronicle  
14 regarding Edgar Wayburn who is a 97-year-old  
15 environmentalist and he is talking about, he says that  
16 everything that's been done for the environment in the  
17 past 50 years is prolog and it just seems so fitting to  
18 think about what this ten year plan is about, that all  
19 the work for the last half century of nuclear weapons  
20 is really just prolog.

113/01.01  
cont.

21 MR. BROWN: You are at the four minute mark  
22 now.

23 MS SUTTON: I am almost done. Everything that  
24 has been done for the environment in the past 50 years  
25 is prolog to the much greater work of preserving the

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1 planet. This is a job not only for us but all of the  
2 generations to come.

3           And I was looking for on the web and I found  
4 this haiku, nuclear haiku by Ted Reynolds who I don't  
5 know who it is but I think it is fitting to think about  
6 how much tritium is going to be brought in here and  
7 used and given all that we know about all the releases  
8 of tritium into the air so far of what that activities  
9 have been. The haiku is: How can I believe, this soft  
10 rain that I so love, radioactive? Thank you.

11           MR. BROWN: Thank you. Patrice was the last  
12 person who had signed up to speak and I think the folks  
13 have had several hours to add their name to the list so  
14 I am going to assume that she is our final speaker.  
15 All right. Thanks very much. Just a few concluding  
16 remarks: First I would like to thank the DOE staff who  
17 began today at about 1:00 o'clock, so we are pushing  
18 about ten hours here and I want to thank you very much  
19 for participating in this meeting. I would like to  
20 also thank the Court Reporter we went many hours over  
21 what was anticipated and you have shown remarkable  
22 stamina in this and thanks very much. I would like to  
23 thank those of you who remain and the scores of members  
24 of the public who came and spoke. I think the record  
25 should show that many people were here for five hours

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1 or more listening, speaking and participating and I  
2 think that's an indication of the commitment of the  
3 public and the importance that the issues raised in the  
4 EIS represent.

5           Finally, I think that we should commend two  
6 citizenship awards to our youngest presenters, I think  
7 that was Oscar Reyes and Gus Scheis who at the age of  
8 ten or something like that participated in the process.  
9 I think that is a model of citizens paying attention  
10 and getting involved at an early age.

11           So with that, I think we can adjourn this  
12 meeting and thanks again.

13

14           (Whereupon, the meeting was concluded).

15

16

17

18

19

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22

23

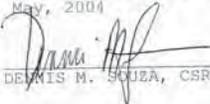
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1 STATE OF CALIFORNIA                    )  
2 COUNTY OF ALAMEDA                    ) ss:  
3  
4  
5  
6  
7                    I hereby certify that the public hearing  
8 was taken at the time and place therein named; that the  
9 comments of the said speakers was reported by me, a  
10 duly Certified Shorthand Reporter and disinterested  
11 person, and was thereafter transcribed into typewriting  
12 under my direction.  
13  
14  
15                    WITNESS WHEREOF, I have  
16 hereunto subscribed my  
17 hand this 14th day of  
18 May, 2004  
19   
20 DENNIS M. SOUZA, CSR No. 3893  
21  
22  
23  
24  
25  
26

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1 those and make them part of the record. To ensure  
2 everybody has an opportunity to make their comments on  
3 the draft site-wide environmental impact statement I am  
4 going to ask every person confine their comments to  
5 five minutes. I will give you a notice at the four  
6 minute mark so you can gracefully conclude your  
7 comments. You may submit any additional comments in  
8 writing, by fax, by e-mail and so forth. All comments  
9 that are received by DOE have equal weight. So if you  
10 have a longer statement that you can't get finished in  
11 five minutes, the remaining part of the statement will  
12 receive equal consideration with what you are able to  
13 say.

14 I will also call the name of the next speaker  
15 along with the person who is currently coming up just  
16 to alert you and that can save some time.

17 Tom Grim will be serving as the hearing  
18 officer for this hearing and with that we will start  
19 the public comment period. Dr. Virginia Bliss is our  
20 first speaker. She got here well ahead of everybody  
21 else, so this is your reward, you get to go first.

22 DR. BLISS: What a reward. Okay. Thank you  
23 very much, panel, thank you for the excellent work  
24 you've done preparing the materials and I will say that  
25 I am very impressed with the site-wide EIS and until

1 This meeting started I couldn't figure out what SW  
2 meant. Now I have that straightened out. So I am  
3 impressed that a lot of good work has been done to  
4 protect us from radiologic hazards.

5 The organization I represent is parents,  
6 Americans, Californians, humans and by way of being at  
7 California I was educated all over the place in  
8 California, at UC Davis, UCLA, Stanford and so I know  
9 some things about chemistry, some things about  
10 biochemistry, some things about radiologic biology;  
11 but, I am not coming here as an expert on any of those  
12 things, I am kind of coming here as a pediatrician.

13 In the medical field and I think in the  
14 teaching field and I think we are discovering in the  
15 reconstruction field it is a lot of work, a lot of work  
16 to try to help and improve the health of someone who  
17 has been injured with trauma, for example, or a tumor,  
18 for example, and for that reason, pediatrics is really  
19 interested in prevention and education.

20 Now, I am interested also in the statement of  
21 purpose of -- well, this is a division of the US  
22 Department of Energy National Nuclear Security  
23 Administration and this says that the continued  
24 operation of LLNL is critical to the NNSA's Stockpile  
25 Stewardship Program and to preventing the spread and

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1 use of nuclear weapons.  
2 Lets see, Mr. Grim, I saw really very good  
3 work discussing cultural, biologic, waste management,  
4 water, noise -- a lot of potential effects to this  
5 community of the type of development that is projected  
6 in the coming ten years but I did not see any  
7 environmental impact statements on the use of these  
8 weapons. As a doctor that is really important to me  
9 because as I mentioned taking care of an injured person  
10 is a lot of work and most people in my field are very  
11 interested in prevention.

1/02.01

12 When I was growing up there was some  
13 discussion about nuclear weapons being a deterrent and  
14 those of us my age, I use hair dye, but I am in my 50s  
15 probably remember duck and cover. Duck and cover. I  
16 was terrified as a child. I was terrified for maybe  
17 three decades of my life. I was very frightened to  
18 become a mom. So it wasn't a deterrent to my fear, I  
19 will tell you that.

20 So when we are looking at the three  
21 categories, the different alternatives for operating  
22 LLNL, I would like to tell you that I am a member of  
23 this third category called reduced operation  
24 alternative and in this category I support reduction of  
25 stockpile stewardship program because I am trying to --

1/02.01  
cont.

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1 I am imagining from what I am hearing today -- it kind  
2 of suggests that the stockpile stewardship program  
3 sounds to me like it has to do with weapons  
4 development. We heard that Lawrence Livermore is a  
5 research facility. We heard that more materials are  
6 expected to be coming through. And so this sounds like  
7 it may have something to do with development of nuclear  
8 weapons.

9 MR. BROWN: You have a minute left.

10 DR. BLISS: Thank you. Okay. So as a  
11 pediatrician and as a Californian, as sort of a  
12 scientifically educated Californian, I am an advocate  
13 for the nonuse of nuclear weapons rather than an  
14 advocate for the development of new varieties of  
15 nuclear weapons and I thank the Department of Energy  
16 and the representatives of Lawrence Livermore for this  
17 opportunity to learn and to speak with you and to let  
18 my comments be recorded. Thank you.

19 MR. BROWN: The next speaker is Richard  
20 Marracq and Caroline Courtright will follow.

21 MR. MARRACQ: Good afternoon. I just wanted  
22 to say Tom, you are quite a handsome man, there is a  
23 little Antonio Banderas thing going on there. Does  
24 anyone see that? Very nice.

25 My little comic relief there. My name is

1/02.01  
cont.

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1 Richard Marracq. I am a chaplain at Palo Alto  
 2 Community Church so my area is, of course, not anything  
 3 to do with nuclear physics or any of those sciences.  
 4 My area is ethics and moral responsibility. As a very  
 5 concerned citizen, I am extremely concerned by the  
 6 proposed increased operations at Livermore. The  
 7 increases in plutonium and tritium limits alone are  
 8 extremely alarming. By the grace of God we survived 40  
 9 years of the Cold War and the madness of mutually  
 10 assured destruction. The arms race of the latter part  
 11 of the 20th century was one of the great scourges in  
 12 human kinds history. And we the people will not  
 13 tolerate a new arms race now in the 21st century. It  
 14 is time to end this madness.

15 Renewed testing of weapons and the new  
 16 generation of so-called mini-nukes or bunker busters,  
 17 most of the development and research no doubt will go  
 18 on at Lawrence Livermore and is probably contained in  
 19 the thousands of pages of the document. I believe that  
 20 these new generation of mini-nukes pose the greatest  
 21 threat to peace and security in our world today. These  
 22 weapons will generate a whole new arms race as the  
 23 lesson of the Iraq war demonstrates that like North  
 24 Korea you better damned well have nuclear weapons to  
 25 deter a US invasion of your country. And these

2/04.01

3/02.01

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1 mini-nukes will only increase the likelihood of their  
 2 use in battle field situations by our forces. I find  
 3 in concept obscene and unacceptable under any  
 4 circumstances. Furthermore, their compact and portable  
 5 nature may even realize our greatest fear that these  
 6 weapons will find their way onto the black market and  
 7 into the hands of terrorists. Nuclear weapons and  
 8 nuclear power are part of the past, not our future. If  
 9 the proposal for increased operations is approved at  
 10 Livermore, the people will not sit by. We will not  
 11 allow this to stand. People from all over the Bay  
 12 Area, indeed the Nation and the world, will come to  
 13 protest, demonstrate and engage in civil disobedience  
 14 to stop this. If we must lie down in the street in  
 15 front of Livermore, then so be it.

16 This new generation of operation and weapons  
 17 at Lawrence represents the biggest threat to peace in  
 18 our world today. We the people will respond by  
 19 exercising our constitutional rights to demonstrate.  
 20 We will not let this stand. My position is just say  
 21 no, no action alternative. Thank you.

22 MR. BROWN: Caroline Courtright to be followed  
 23 by Carol Kuzora.

24 MS. COURTRIGHT: My name is Caroline  
 25 Courtright and I kind thought as I was thinking about

3/02.01  
cont.

2/04.01  
cont.

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1 starting I was thinking about why is Livermore  
2 important to me but that's like saying why is the  
3 planet important to me. So instead I will answer it on  
4 personal basis. I have a brother and sister-in-law who  
5 live in Livermore. I have 15 other relatives that live  
6 within 20 miles. My sister in-laws' parents both died  
7 of lung cancer and they weren't smokers but as happy  
8 owners of a walnut orchard they were the proud  
9 recipients of receiving the sewer sludge that  
10 Livermore Lab used to give out to locals to use as  
11 fertilizer in the 60's and '70's.

12 So I have three kind of goals or suggested  
13 requests as goals for today and one is that my first  
14 preference would be to convert the Lab to civilian  
15 science purposes and two, to clean up the mess that  
16 exists rather than propose new polluting projects;  
17 however, if a decision needs to be made on the  
18 selection of one of the alternatives for the continued  
19 operation of LLNL, clearly the only possible option is  
20 the reduced operational alternative. The third goal is  
21 to recirculate a new draft SWEIS. In my view, this EIS  
22 is seriously flawed.

23 Today I will talk only about two problems with  
24 this EIS and I, in starting, should suggest that I only  
25 really had time to read the summary and a quick

4/07.01

5/06.01,  
31.04

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1 reference to the large volume. In section 5218 there  
2 was a section called building a seismic upgrades and it  
3 states: Quote there are 108 buildings identified at  
4 LLNL as having potential seismic deficiencies relative  
5 to current codes," end quote.

6 I couldn't find a timeline or mandate for  
7 these repairs and I suggest that the Lab have no  
8 increase in plutonium or tritium amounts or storage  
9 until all seismic up grades are completed.

10 Another omission I didn't see anywhere in the  
11 summary was that there is an earthquake fault zone less  
12 than 200 feet from the property boundaries of the  
13 Livermore Lab. I'd like this included in the EIS and  
14 also in the summary. It is important information.

15 The next section I would like to discuss is  
16 S610 and that was called site contamination and it  
17 states, this is a doozy of a sentence: Areas of soil  
18 and groundwater contamination exist at the Livermore  
19 site and Site 300. These are primarily the result of  
20 waste -- no, excuse me, of past waste management  
21 practices, some of which took place during the 40's  
22 when the Livermore site was a naval air station.

23 To my knowledge, it is quite well documented  
24 that there is a radioactive groundwater plume emanating  
25 out from the Laboratory traveling west towards

6/14.01

7/24.01

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1 Livermore and the plutonium contamination has been  
2 found, I don't know if it is in the City limits, near  
3 the city limits, underneath a park there, it is a city  
4 park in Livermore. The Livermore Lab site itself is  
5 included on the Superfund list as the Nation's most  
6 environmentally damaged site due to contamination from  
7 many of its operation.

7/24.01  
cont.

8 How can that fact not be mentioned in the EIS  
9 or even in the summary of the EIS?

10 MR. BROWN: One minute remaining.

11 MS. COURTRIGHT: To not include this  
12 information makes it in my mind fatally flawed and at  
13 the very least it is disingenuous and means we cannot  
14 trust DOE to manage proper oversight of the problems it  
15 creates. Do not expand the projects or the facilities  
16 at LLNL but scale back to reduced operation or better  
17 yet convert the Lab to civilian science research.

8/07.01

18 In closing I will say this: The United States  
19 should be leading the world in stopping the  
20 proliferation of nuclear weapons and negotiating open  
21 multi-lateral agreements for eventual disarmament.  
22 Instead by announcing our intention to continue to  
23 develop new weapons and signaling a new policy that  
24 targets non-nuclear states with nuclear weapons, we are  
25 encouraging their spread and risking the beginning of a

9/01.01

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1 new arms race. Thank you.  
2 MR. BROWN: Thank you. Carol Kuzora to be  
3 followed by Mike Schmidt.

9/01.01  
cont.

4 MS. KUZORA: Hi. I am Carol Kuzora. I came  
5 down from Grass Valley, over two hours away. I just  
6 happened to hear about this and found it rather  
7 alarming. I am amazed at how much information this  
8 (indicating) sweeps under the rug. It is just not  
9 there. They do talk about the impact of building and  
10 disturbing the soil like any building project anywhere  
11 but this just isn't any building project anywhere.  
12 Apparently you are plan to more than double the  
13 plutonium limit, to manufacture bomb cores; heat  
14 plutonium and shoot beams through it -- through the  
15 vapor cloud to break it up into separate isotopes; to  
16 use plutonium in the ignition facility experiments,  
17 manufacture radioactive tritium targets and increase  
18 your tritium at risk limit tenfold and undertake  
19 activities to speed to return to full scale nuclear  
20 testing and import live anthrax and plague and other  
21 biological pathogens by collecting a co-locating a big  
22 warfare research facility here with nuclear weapons  
23 even though it has been stopped before years ago.

10/04.01

24 None of that was actually mentioned in here,  
25 so I thought I would bring it up. I am concerned about

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1 what the population of this country and indeed of the  
2 world would think when they hear about this. They are  
3 entitled to know.

10/04.01  
cont.

4 What we are talking about here is those  
5 weapons of mass destruction that we accuse other  
6 countries of having or developing or planning --  
7 nuclear and biological.

8 This document sweeps all that under the rug  
9 and our country will lose credibility with the rest of  
10 the world, if it hasn't already. There is not  
11 negligible risk of cancer or other diseases. The  
12 cancer rate's already up around here so it is not as  
13 negligible as these numbers in here suggest so I  
14 recommend the reduced operational alternative. Thank  
15 you.

11/06.01

16 MR. BROWN: Mike Schmidt.

17 MR. SCHMLDT: My name is Mike Schmidt. I am  
18 the chief executive officer for the Tracy Chamber of  
19 Commerce. Our Chamber of Commerce represents 650 local  
20 businesses employing about 15,000 employees in the  
21 greater San Joaquin Valley area. The Chamber  
22 recognizes the national security interests that the Lab  
23 plays in today's world, as insecure as it may be, and  
24 as ethical we might discuss weapons and non-weapons  
25 production. The fact is we need to have agencies such

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1 as the Lab working for our security and working for our  
2 country. We applaud you and thank you for that.

3 We also appreciate and recognize the business  
4 partnership you have had with Tracy and Livermore for  
5 the past 50 years. It has been a very healthy  
6 relationship we believe for both. Your community  
7 relationships with civic, charitable actions, schools,  
8 the Chamber and the service clubs, you recently hit  
9 Rotary Club and made this presentation to us, helps us  
10 reassure ourselves in the fact that what you are trying  
11 to do and the role you play in our community.

12 We also appreciate 8500 people in this area  
13 have jobs because of the Lab. 2316 of them in the  
14 Central Valley alone. These are jobs people call for  
15 living wage, these are living wage jobs, jobs we need  
16 in this area. Our focus is really on jobs, because  
17 that is what the Chamber of Commerce is about. I am  
18 not a scientist, I am not an ethicist trying to decide  
19 if it is good, bad or indifferent. But I am concerned  
20 and want to applaud the employment opportunities.

21 Also, the employment opportunities you provide  
22 to local businesses and contractors to the tune of 650  
23 million dollars and 160 million dollars of that just in  
24 the Valley. That is awesome money that helps raise  
25 families, provides schools, provide programs and ensure

12/04.01,  
15.01

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1 charities have operations so forth.

2           The Chamber also values the small business

3 program office designed to focus on disadvantaged

4 women, veterans, disabled owned businesses giving them

5 the opportunity to move forward in their economic

6 desire for prosperity. The supply and management

7 program with 220 million dollars in annual procurements

8 that again help support local businesses and

9 employment. The individual -- excuse me, the industry

10 partnership and commercialization office. This

11 partnership with industry has helped transfer

12 technology from the private sector to the private

13 sector from that of the Lab and we appreciate that.

14           The small business innovation research and

15 tech transfer program where 40 percent of the

16 partnerships are with small business start-up

17 companies. To me this is an awesome business

18 opportunity for local businesses.

19           Let's look to the future. I tend to support

20 the proposed action alternative. I think we need to be

21 looking forward not trying to look back. Obviously we

22 want responsibilities in how these materials are

23 handled and I have to trust you folks know what you are

24 doing because I wouldn't have a clue. 87 percent of

25 the Chamber members in this area have ten or fewer

12/04.01,  
15.01  
cont.

1 employees so the employment opportunity and the

2 relationship with the Lab is critical. The EIS

3 proposal in the form of the projects, you are looking

4 supports and complements your core mission of science

5 of technology, we believe that is critical. The

6 upgrade and renovations of Site 300 in Tracy provides

7 business opportunities, the demolition, seismic

8 upgrading and new construction means opportunities for

9 employment as well as for business in the region in the

10 valley.

11           Tracy Chamber of Commerce applauds the Lab for

12 the national security role they play, their leadership

13 in the region and their economic contribution and

14 opportunities they provide for men and women and

15 business in the Central Valley. We, again, propose

16 action alternative as something we see should move

17 forward and we thank you very much Tom for you and your

18 team for being in Tracy and giving us and all these

19 folks also the opportunity to speak. Thank you.

20           MR. BROWN: Thank you. Marylia Kelley is next

21 and Tara Dorabji will follow her.

22           MS. KELLEY: My name is Marylia Kelley. I am

23 executive director of Tri Valley Cares in Livermore.

24 We have 4200 members of the organization, most who live

25 in the area or around Tracy and in the Central Valley.

12/04.01,  
15.01  
cont.

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1 First off I would like to state that the  
 2 Lawrence Livermore National Laboratory were to be  
 3 converted to civilian science initiatives would employ 13/07.01  
 4 more people and have more spin offs than are currently  
 5 occurring. In fact, now when something spins off from  
 6 the Lab, that is called nuclear proliferation, often.  
 7 I would like to formally request an extension of the  
 8 public comment period by 30 days. At Site 300 the 14/31.02  
 9 Tracy Hills development is planned for approximately  
 10 two miles from the Livermore Lab Site 300 boundary and  
 11 ranches, recreational facilities and agricultural land  
 12 are currently right up to and right next to Site 300.  
 13 The socioeconomic impact section of the site-wide  
 14 environmental impact statement must adequately analyze 15/15.02  
 15 the economic and social impact of potential releases  
 16 and accidents at Livermore Lab. This is obviously  
 17 equally true for the community around the Livermore Lab  
 18 main site as well.  
 19 I would note that the environmental impact  
 20 statement draft said that most shots, and you asked  
 21 what shots, those test shots are hydrodynamic test  
 22 shots at Site 300. They are often done with depleted 16/17.01  
 23 uranium use instead of the plutonium cores of bombs so  
 24 they can test new designs and shape charges and  
 25 different things at full scale and they in the past

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1 have used tritium in the shots and apparently are  
 2 planning to use tritium in the shots again in the 16/17.01  
 3 future which is radioactive form of hydrogen and also  
 4 the high explosives. The test shots at Site 300 are  
 5 one of the reasons why the soil and groundwater there  
 6 are so contaminated that Site 300 has its own listing  
 7 on the Environmental Protection Agency's National 17/24.02  
 8 Priorities List which is what's commonly referred to as  
 9 the Superfund list, and by the way the Navy never used  
 10 Site 300, so if the Lab didn't do it, it was the old  
 11 Ohlone Indians.  
 12 We call on Site 300, on the Lab, on the  
 13 Department Of Energy to convert Site 300 to civilian  
 14 science initiatives and specifically to close the 13/07.01  
 15 firing tables at Site 300. We also call on the  
 16 document, if it doesn't choose to do that in the  
 17 document, as an interim measure to let us know how many  
 18 shots a year are planned in the open air, how many are  
 19 planned in the contained firing facility, how many will 16/17.01  
 20 be using tritium in the open air, how many will be  
 21 using tritium in the contained firing facility.  
 22 Storage of nuclear materials. This plan as  
 23 you heard will more than double the storage limit for  
 24 plutonium at Livermore Lab from 1540 pounds to 3300  
 25 pounds. It would increase the tritium storage limit 18/08.02

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1 from 30 to 35 grams and our position is when we call on  
 2 the DOE to deinventory the plutonium and tritium stocks  
 3 at the Livermore Lab not increase them. 18/08.02  
 4 Plutonium atomic vapor laser isotope cont.  
 5 separation, let me say that word here and now because  
 6 when you look in the document are you going to find it 19/27.01  
 7 is called the integrated technology project but it is  
 8 the old plutonium AVLIS project that we stopped in 1990  
 9 before they ran plutonium in the system. This is a  
 10 scheme to heat and vaporize plutonium and then shoot  
 11 laser beams through it to separate out plutonium  
 12 isotopes for nuclear weapons experiments. In order to  
 13 do this as you saw in the view graphs they will  
 14 increase the amount of plutonium that can be used at  
 15 any one time in any one room from 44 pounds to 132  
 16 pounds, a three-fold increase and the feed stock I 20/33.01  
 17 believe it said was 220 pounds of plutonium a year,  
 18 most of that plutonium oxide that would have to first  
 19 be converted to metal. There is processing, there are  
 20 hazards at every step of this and they are inadequately  
 21 examined in the environmental impact statement.  
 22 Further, this has proliferation risks and those must be  
 23 analyzed in the Environmental Impact Statement and as 21/01.01,  
 24 we said yesterday, that Environmental Impact Statement 31.04  
 25 then needs to be recirculated in draft so that we can

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1 look at the adequacy of that non-proliferation analyses  
 2 and the adequacy of these additional environmental 21/01.01,  
 3 analyses and comments on them before the document is 31.04  
 4 finalized. cont.  
 5 MR. BROWN: One minute remaining.  
 6 MS. KELLEY: The document proposes new  
 7 experiments in the National Ignition Facility megalaser  
 8 to use plutonium, highly enriched uranium, lithium  
 9 hydride, lithium deuteride and fissionable materials  
 10 like thorium 232. We were told in 1995 when the  
 11 Department of Energy did a non-proliferation analysis  
 12 that they had no intention of using fissile materials 22/01.01,  
 13 like plutonium in the NIF. In fact they didn't look at 31.04,  
 14 it in that document because they weren't planning to 26.01  
 15 use it. Now they are planning to use it. They need to  
 16 redo the non-proliferation analysis. Further, it needs  
 17 to be part of this document, recirculated for public  
 18 comment so that there is some adequacy requirement  
 19 under the National Environmental Policy Act, doing this  
 20 outside the NIPA process is not sufficient.  
 21 Additionally, these experiments will have an  
 22 enormous cost and I found that the cost was missing  
 23 when I read that appendix. It needs to be included. 23/03.02  
 24 The environmental cost, the proliferation cost, but  
 25 also the money cost. This is our tax dollars at work

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1 and we need to know how much of our tax dollars they  
 2 want for these various operations.  
 3 Tritium target manufacturing, they plan to  
 4 manufacture the targets for the NIF fusion experiments  
 5 here at Livermore. We were told in the mid '90's they  
 6 would never do that at Livermore because it is such a  
 7 populated area and they knew that there would be  
 8 emissions from that activity. Well, now they are  
 9 planning to manufacture the targets and they say that  
 10 that is one of the programs, one of the reasons why  
 11 they want to increase the at risk limit for tritium at  
 12 Livermore Lab nearly tenfold and I am still a little  
 13 confused as to why you would need up to 30 grams of  
 14 tritium in a process at the same time to make small  
 15 targets for the NIF. That requires an awful lot more  
 16 analysis and explanation in this document.  
 17 And the other reason given for upping the  
 18 tritium limit tenfold was enhanced test site readiness  
 19 and I know there are diagnostics that use tritium or  
 20 other hydrides in it; however, this was not described  
 21 in an unclassified way in enough detail to comment on.  
 22 That needs to be taken care of and again the document  
 23 recirculated for public comment. It's very important  
 24 that this information be in there because it goes to  
 25 the purpose and need under NEPA. How can anybody

23/03.02  
cont.

24/26.04,  
34.01

25/39.01

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1 evaluate the purpose and needs statement if there is  
 2 not enough information about what you are planning to  
 3 do in a number of these programs?  
 4 It also goes to the alternatives. How can  
 5 anyone adequately offer alternatives and evaluate  
 6 alternatives when not enough information is given to  
 7 describe the project?  
 8 So I call on you to cancel these projects and  
 9 as an interim measure to describe them more adequately,  
 10 do a better job of analyzing the environmental impacts,  
 11 look at the proliferation impacts, do it in the NEPA  
 12 document, recirculate it for public comment. Thank  
 13 you.  
 14 MR. BROWN: Tara, and then Loulena.  
 15 MS. DORABJI: Hello. I am Tara Dorabji I am  
 16 the Outreach Director for Tri Valley Communities  
 17 Against a Radioactive Environment. We have some 3800  
 18 members, many of whom live in the Tri Valley area, I  
 19 am going to respond to several things. First of all I  
 20 just want to get into the record that yesterday there  
 21 were about 450 people that attended the hearings in  
 22 Livermore, so I am really happy to see folks out today  
 23 and just, you know, want that to officially be in the  
 24 record. Many of those people were unable to speak,  
 25 obviously because of time restraints.

25/39.01  
cont.

26/31.01

18/08.02  
cont.

27/01.01,  
31.04

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1 Also, I would just say one of the things that  
2 came up a lot in questions yesterday was who makes the  
3 final decision and the answer we got was that it was  
4 Spencer Abraham and Linton Brooks. I am very happy to  
5 see three people on the panel today, but I think in the  
6 future, since there are so many people coming out, this  
7 is such an important issue, it would be really nice to  
8 see a representative from their office at the hearings  
9 attending them so that we feel a level of seriousness  
10 in response to our comments directly in that people are  
11 firsthand taking them. That would be really important,  
12 I think, in the future.

28/31.08

13 In addition, I just wanted to address there  
14 has been a lot of comments and questions about workers'  
15 compensation and the answer to that is it's not in the  
16 SWEIS. Well, why isn't it in the site-wide  
17 environmental impact statement, many of the proposed  
18 projects, specifically, things like putting plutonium  
19 in the National Ignition Facility will result in  
20 increased exposure to workers and what happens once  
21 they are exposed? What happens once they are sick?  
22 What happens once they are dead? That is a reality,  
23 people die making and designing these nuclear weapons.  
24 Children, you know, I mean, you heard from a worker  
25 yesterday that said: How come you are not addressing

29/23.04

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1 the issue about the children. The children of  
2 employees? What about the compensation. That  
3 absolutely needs to be part of the document, there are  
4 severe deficiencies with the compensation act, the  
5 types -- first of all, how you have to prove that, the  
6 types of diseases that are actually and sicknesses that  
7 are actually covered. All of this needs to be expanded  
8 and when you are talking about increasing workers  
9 dangers this needs to be part of the overall analyses.  
10 How will these people become compensated what happens  
11 once they are dead from their work. You know, working  
12 for something that, to them you know they really feel  
13 they are working to serve the nation and they feel  
14 betrayed and that needs to be part of the analyses.

29/23.04  
cont.

15 And I also, you know, I think that is an  
16 important critique of the jobs when talking about  
17 employment. I am really disappointed to hear that  
18 neither of the Chambers looked at well what about the  
19 sickness? What about raising issues about who is  
20 getting sick from the work? And I think that is really  
21 important when you are talking about employment too.

22 And I would just like to raise an issue too as  
23 far as the revenue from the Laboratories.  
24 Livermore Lab is managed by the University of  
25 California. Through that it's exempt from paying

30/32.03

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1 certain types of state taxes and I think that is an  
2 issue. How come designing nuclear bombs is a nonprofit  
3 sort of industry? How come they don't have to pay  
4 certain types of state taxes and I think, you know,  
5 that's an issue for the State of California as well.

30/32.03  
cont.

6 I would also like to reiterate, though, the  
7 request for extending the public comment 30 days. A  
8 whole lot of folks never heard about this, you know,  
9 until last night or last week and they really deserve  
10 that opportunity to comment and I hope that you will  
11 take that into consideration and that we will hear from  
12 you shortly within the next week as to that  
13 possibility.

31/31.02

14 From there I would like to talk a little bit  
15 about Site 300. I was actually hoping that today some  
16 of the view graphs would reflect some of the specific  
17 issues at Site 300 like I noticed one on the water, you  
18 know. It said that all groundwater, you know,  
19 remediation that is occurring will continue but it  
20 doesn't mention at Site 300 there is groundwater  
21 contamination that continues and it is actually above  
22 drinking water standards.

32/24.02

23 MR. BROWN: One minute left.

24 MS. DORABJI: And I would specifically with  
25 Site 300 like to say that there is a major expansion

33/04.02

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1 going on. There should not be this expansion, such as  
2 building a whole new energetic materials processing  
3 center. This would be a huge high explosives  
4 processing facility capable storing up to 3000 pounds  
5 of explosives. We don't need to be expanding in the  
6 explosives. We call specifically to look at  
7 environmental remediation, cleaning up, not going on  
8 and continuing the explosives and actually building  
9 whole new facilities where there is endangered species  
10 and really neat habitats such as native grasses in  
11 California and in addition it will increase, the  
12 proposed alternative does increase, the population dose  
13 to the general public and there is real community  
14 health risks happening here and it's not acceptable.

33/04.02  
cont.

15 The maximum exposed individual routine would  
16 more than double under the proposed action and  
17 specifically I would like to know about the 194 curies  
18 that are predicted under the no action alternative.  
19 It's assumed that there will be a release of 194 curies  
20 of tritium but there wasn't any releases in 2001. What  
21 are these experiments and why is it listed under the no  
22 action alternatives if there were no releases in  
23 2001 --

34/17.04

24 And finally, just one final comment on the  
25 plutonium disposition: One of the reasons that

35/08.02

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1 Livermore Lab is having such difficulty getting rid of  
 2 their excess plutonium is because it is a major issue.  
 3 This stuff is radioactive for 240,000 years and other  
 4 states don't want to have it and they want to keep  
 5 playing with it and so this is a huge issue for the  
 6 State of California. If we let this come to Livermore,  
 7 where is it going to go? Who wants to take it, you  
 8 know? I mean, it is a huge issue. Governors have been  
 9 laying down at their state border saying no more  
 10 shipments of plutonium and here we have our local  
 11 representative, I'm in Livermore, Tauscher really  
 12 saying you know we support the plutonium. She was just  
 13 quoted in the Chronicle today. And this is a legacy  
 14 waste that I am going to have to be living with and  
 15 that is a question and I don't have children, I haven't  
 16 actually birthed a child at this point in my life time  
 17 and I have to let you know I would feel guilty, I would  
 18 feel guilty carrying my child in Livermore because I  
 19 know about the low dose radiation. I am educated about  
 20 it. I understand the biological effects and I would  
 21 feel guilty and so to me, raising the plutonium limit  
 22 at Livermore is not just absurd but it's, you know,  
 23 it's preposterous and it needs to be deinventoried so  
 24 thank you for hearing my comments and I'll go on to the  
 25 next.

35/08.02  
cont.

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1 MR. BROWN: Thank you. Okay. Loulena Miles  
 2 is next and Suzanne Huntoon. We are just about a third  
 3 of the way through our speakers I think. To be  
 4 considerate of those signed up to follow, if you folks  
 5 can stick closer to the five minute rule that would  
 6 help.  
 7 MS. MILES: My name is Loulena Miles I am the  
 8 staff attorney at Tri Valley Cares. I am here to talk  
 9 about a little bit of the general direction of the Lab  
 10 and then a couple specific programs. My position at  
 11 Tri Valley Cares position is the Lab is moving in the  
 12 wrong direction. This is an inappropriate use of  
 13 funding in a post Cold War era to be committing the Lab  
 14 to an almost exclusive nuclear weapons mission for the  
 15 foreseeable future.  
 16 I also feel that it is irresponsible for such  
 17 a community of premier scientific minds to conceive of  
 18 conducting such high risk projects in the midst of a  
 19 seismically active area and a densely populated suburb  
 20 of the San Francisco Bay Area.  
 21 I want to object to a number of projects and  
 22 echo the sentiments of my colleagues and the community  
 23 that have spoken before me; but, specifically I want to  
 24 focus on two things today: The treatment of the  
 25 biological assessment and the bio warfare agent

36/03.01

37/14.01

38/35.01

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1 research at the labs and I will be following this up  
2 with written comments.

38/35.01  
cont.

3           So first of all, I just want to bring up,  
4 Mr. Grim, in your presentation today, you mentioned  
5 projected minor loss of animals and habitat that are in  
6 the proposed alternative and I want to talk about some  
7 of the loss at Site 300.

8           We are not just talking about animals and  
9 habitat. We are talking about endangered species and  
10 we are talking about possible critical habitat, areas  
11 that was listed as critical habitat and is likely to be  
12 relisted as critical habitat including even one flower  
13 species long thought to be extinct in California.

39/16.02

14 According to the SWEIS itself the Lab at Site 300 could  
15 be judged as one of the largest native grasslands of  
16 this kind currently known in California. At the site  
17 the Lab is proposing to build a new energetic materials  
18 processing center, 40,000 square foot high explosives  
19 processing facility with magazines for storing up to I  
20 believe 3,000 pounds of high explosives. Also

40/16.04

21 explosive testing will occur one mile from the Site 300  
22 northern border on a weekly to daily basis that will  
23 primarily affect birds but the document does not talk  
24 about the contamination and fall out in the biological  
25 assessment and how that could affect species. It does

41/16.05

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1 say that diurnal raptors that forge directly over the  
2 facilities are the species most vulnerable to flying  
3 debris and shock over pressure. I would like to see  
4 the other environmental effects outlined in the final  
5 document and actually I would really like to see a  
6 draft recirculated so that the community can actually  
7 comment with a full breadth of knowledge on these  
8 issues.

41/16.05  
cont.

9           I also wanted to just mention that there are  
10 six federally listed endangered, threatened, proposed  
11 threatened or candidate species that will be affected  
12 by the plans and including the California red legged  
13 frog and the tiger salamander and as I asked in my  
14 questions DOE's plan in the SWEIS will violate current  
15 agreement with the US Fish and Wild Life Service to  
16 take or kill probably 25 species, 25 individual  
17 organisms and different species. The new projects will  
18 require a greater take. The SWEIS does not outline  
19 what the desired take will be or even what it possibly  
20 could be based on these expansions at Site 300 and I  
21 would like to know what the Lab could foresee as being  
22 the take and how they plan to mitigate that take. They  
23 do talk about the sharp facility as a potential  
24 mitigation option for that take and that we feel is  
25 very inappropriate because they do, in the document

42/16.03

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1 itself it mentions that there is tritium contamination  
2 there and I do not think that that's an appropriate  
3 mitigation measure for a breeding pond for red legged  
4 frogs which is an endangered species in California and  
5 that lab, that area at Site 300 will probably be in the  
6 critical area for the species.

42/16.03  
cont.

7 MR. BROWN: You are at the four minute mark.

8 MS MILES: The other thing I wanted to bring  
9 up is the biological warfare agent research at the Lab.  
10 There has been an explosion of this work in recent  
11 years. Most recently in December 2002 the Lab approved  
12 a BSL-3. This is the first time the Department of  
13 Energy has ever housed this high of a level of a bio  
14 warfare agent facility which is defined by CDC, Center  
15 of Disease Control, as this level, BSL-3, allowing work  
16 with agents that have the potential for airborne  
17 transmission that may cause death if inhaled and left  
18 untreated this includes agents like an anthrax, bubonic  
19 plague and botulism. The Lab will be genetically  
20 modifying and aerosolizing these agents.

43/35.01

21 We do not believe that this type of work  
22 should be allowed in a super secret nuclear weapons  
23 laboratory. We feel it is contrary to the spirit of  
24 the biological weapons convention and it sets a very  
25 dangerous precedent for other countries in the world.

1 We also noticed that it is part of the no action  
2 alternative; however, we pointed out in a lawsuit that  
3 this document was fatally flawed. The approval  
4 document for that facility and that there is a current  
5 Court order disallowing impacts or importing of these  
6 agents based on the totally, well based on the fact  
7 that we are currently in litigation on it. So I think  
8 that should be reflected in the document. I think that  
9 is relevant information. There was a totally  
10 inadequate accident scenario in the approval document.  
11 There was no modeling that was done at Livermore Lab on  
12 how these agents could be released. They relied on  
13 outdated models that were done on a whole different  
14 facility and not even within the Department of Energy.  
15 And in light of the rapidly expanding bio warfare agent  
16 research we urge the energy department to not just do  
17 an EA which is a very flimsy environmental document but  
18 to conduct programmatic environmental assessment for  
19 the expanding bio programs at the Lab not just include  
20 this in a small EA and encrypted mentions in the  
21 site-wide EIS.

43/35.01  
cont.

44/25.04

22 And the last comment I have is just about the  
23 fact that many of the projects at the Lab are  
24 duplicative or even in triple what is already going on  
25 within other DOE sites including the BSL-3, they

45/08.01

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1 proposed one at the same time at the Los Alamos Lab.  
2 It is inexcusable to conduct a site-wide environment  
3 impact statement without consideration of a rational  
4 division of labor among the labs such as Los Alamos and  
5 Livermore Lab and to think about not duplicating and  
6 wasting our tax dollars, not duplicating the hazards  
7 and what are you thinking in putting this in such a  
8 highly populated area. I urge to you rethink more  
9 efficient and safer ways to spend or tax dollars, thank  
10 you.

45/08.01  
cont.

11 MR. BROWN: Suzanne Huntoon to be followed by  
12 John Huntoon.

13 MS HUNTOON: Hello. I would like to thank you  
14 for the opportunity to be here today and I would like  
15 to thank you for your beautiful slide presentation and  
16 your overviews, but unfortunately, my friends, the  
17 proposal, the slide review, is all inane and inadequate  
18 and antiquated and I say that because all which we have  
19 been presented has been totally out of context. It is  
20 non-contextual. It doesn't really reflect the world at  
21 large and the reality of the proliferation of the  
22 knowledge of nuclear bomb making which is spreading  
23 rapidly all over the world. As a matter of fact, I  
24 think that some people even assert that a lot of this  
25 information can be gleaned from the internet. We have

46/01.01

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1 come to a fact in the world where a country, if it is  
2 competent, if it is intelligent, it has the equivalence  
3 of having the nuclear capacity. So we are faced with  
4 everyone having this knowledge, which I believe impacts  
5 on the, you know, legitimacy of the Livermore Labs.  
6 It's all over folks. And it peaked quite a while ago.  
7 The fact is: If our scientists stubbornly cling to the  
8 idea of research and development. Maybe they than  
9 concentrate on miniaturizing nuclear weapons so we can  
10 fit them in our wallet, how about our purse, our hip  
11 pocket. Livermore Labs is a dinosaur and its  
12 extinction is inevitable. I think the sooner we wake  
13 up to that and that Livermore Labs, the public, the  
14 Department of Energy and the people of the  
15 United States and our government wake up to that the  
16 sooner the better, but I digress.

17 My name is Susan Huntoon and I live in  
18 Stockton California. My three-and-a-half years of  
19 living in California and most specifically next to the  
20 Livermore Labs has taught me an immeasurable mass of  
21 critical tough realities about the truth of the  
22 proliferation of weapons of mass destruction in my very  
23 own backyard and the subsequent hazardous fallout of  
24 the irrational and absolutely unnecessary increase in  
25 the production and experimentation of nuclear materials

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1 by Livermore Labs through the sanction and funding of  
2 the Department of Energy. Our public concerns  
3 collectively increase and so it is we witness the  
4 gathering power of the citizen watch dogs of the Tri  
5 Valley community. One could say that our inspiration  
6 today is taken from the image and history from the  
7 constellation of Canis Major, that celestial watch dog  
8 of the after world and the star of Sirius, the  
9 brightest star of the heavens, forming the eye of that  
10 great beast, shining, piercing through the darkness of  
11 our hearts and minds with questions of truth. What is  
12 it exactly that we earthly watch dogs of Livermore Lab  
13 see and hear that awaken our ears and eyes to the call  
14 of seeking meaningful believable answers to our  
15 questions? It is in fact in the sounds that completely  
16 surround us. Those sounds of planning, of the planning  
17 of doubling the storage of plutonium at the labs  
18 resulting in the increase of the lethal potential and  
19 the severity of accidents to rise from the former base  
20 of 44 pounds to 132. I object to the program to  
21 reactivate this vaporization of plutonium, a program  
22 that was negated and ended in the '80's which somehow  
23 has reared its ugly head again.

24 MR. BROWN: At the four minute mark.

25 MS HUNTOON: I object to the planning of

47/27.01

48/02.01

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1 developing more than 300 more nuclear bombs despite the  
2 thousand of nuclear bombs that are already on US soil.  
3 We see the hypocrisy of the US government's hysteria of  
4 the alleged possession of agents of chemical warfare by  
5 third world countries while the US Livermore Labs  
6 openly reengages with aggressive experiments with  
7 pathogens of botulism, black plague, small pox and  
8 anthrax. Yet, let us remember, not only ten --  
9 according to the Nuclear Research Institute in  
10 Washington, D.C., only ten detonated nuclear bombs can  
11 trigger nuclear winter and for those of you who do not  
12 understand what nuclear winter is, it is the collective  
13 smoke, debris, pollution that forms a global black  
14 cloud over the surface of the sky thus blocking out any  
15 sunlight to the surface of the earth, temperatures drop  
16 radically into the subfreezing zone extinguishing all  
17 life on earth, ending time as we know it. The complete  
18 annihilation of the earth and we are sitting here  
19 talking about some more research into nuclear weapons?  
20 We demand a return to reason, sanity and compassion. A  
21 drawing down, a closing down of the operation and  
22 production of weaponry that fuels the profane  
23 spirit-binding and mind-binding obsession with death as  
24 a pathway to peace and life. I certainly concur with  
25 converting the Lab to civilian research, research that

48/02.01  
cont.

49/35.01

50/32.02

51/07.01

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1 would reshape our society to a culture devoted to the  
2 quality life issues of all peoples everywhere. Thank  
3 you.

51/07.01  
cont.

4 MR. BROWN: John Huntoon and Peter Strauss  
5 will be next.

6 MR. HUNTOON: My name is John Huntoon. I live  
7 in Stockton, California. My better half is Suzanne  
8 Huntoon. I'd like to say, to start with, that there is  
9 nothing that I can say that reflective of the way that  
10 I feel that hasn't already been said by people who have  
11 a much better grasp of the details and the procedures  
12 of an environmental impact statement and so forth.

13 Next month I will be 75 years old and so you  
14 wouldn't find it unusual for me to take you back to a  
15 time after the second world war and the use of nuclear  
16 bombs on Nagasaki and Hiroshima. Perhaps, I don't know  
17 whether there is anybody here, really, who could have  
18 seen the documentaries; the news reels that were made  
19 at the time that could describe the complete horror of  
20 the effects on the citizenry of Nagasaki and Hiroshima.  
21 I can tell you that if the Livermore Labs were somehow  
22 magically transported and put in the center of Nagasaki  
23 and Hiroshima, you would have a riot of massive  
24 proportions in Japan throughout Japan to anybody who  
25 might even consider doing that. So the objections that

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1 have been raised here are not local; they are not even  
2 regional. They are world wide. I can make the same  
3 claim if you wanted to put, say, Livermore Labs in the  
4 center of Stuttgart. You folks would be running for  
5 the hills -- the people in Germany wouldn't permit it.  
6 They would be out in the street in a second throughout  
7 the country.

8 So, to think, you know, that what's being  
9 proposed here is somehow local is the biggest mistake  
10 in the world. I would just like to mention really  
11 three things, one I have already done it.

12 I wanted to take you to a time in the past  
13 when a country actually used nuclear weapons. That was  
14 the United States. I want to take you to a time where  
15 we are sitting right here right now and we are  
16 discussing what is, and that's what these gentlemen are  
17 paid -- and young lady are paid to do. That is how  
18 they earn their living, to defend what is at this  
19 laboratory, it is slight tinkering, slight  
20 modifications. That's their job.

21 MR. BROWN: You are at the four minute mark.

22 MR. HUNTOON: Okay. So to think, you know,  
23 that what you can achieve here today, in terms of what  
24 a lot of people have suggested -- close the Lab down or  
25 don't go ahead with anything new -- it's not really

52/07.03

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1 very realistic to think you can do that through a  
 2 public hearing. No. It's gonna take more than that.  
 3 I would suggest one thing that might be done.  
 4 You folks who represent the Lab indicate on a piece of  
 5 paper where the contamination is according to you; what  
 6 the downsides are and what the advantages are of moving  
 7 ahead with these plutonium bits and so forth and then  
 8 the newspaper, the local newspaper, run that compared  
 9 to some of the charges that have been made by Tri  
 10 Valley Cares and then ask for public comment on  
 11 credibility. Who do the average citizens believe?  
 12 So with regard to what is, you know, I think  
 13 you really have to challenge the way things are being  
 14 done here.  
 15 In terms of what will happen, what can happen,  
 16 I don't really think anybody in their right mind could  
 17 say that Livermore Labs is not involved in the  
 18 production of nuclear war heads, nuclear bombs, because  
 19 manufacturing is a process that you have to begin  
 20 somewhere and this is one of the places that it begins.  
 21 The end result are nuclear war heads in submarines,  
 22 airplanes, all over the place. There are plenty of  
 23 nuclear weapons right now to destroy the earth four or  
 24 five times over. So there really isn't any need for  
 25 more new nuclear weapons but let's say you develop

53/04.01

1 these super bunker busters and some of the other things  
 2 you have in mind -- in whose hands are these being  
 3 given? You are giving them to a President who  
 4 describes himself as a war President -- lands on  
 5 aircraft carriers -- a Secretary of Defense who, along  
 6 with his aides have developed a new foreign policy that  
 7 includes preventive wars. Is there any doubt among  
 8 people in the United States that the military intends  
 9 to use these things mini nukes, tactical use.  
 10 MR. BROWN: If you can just make a final  
 11 point.  
 12 MR. HUNTOON: They will be used either  
 13 purposely as we have already done or accidentally and  
 14 the notion of deterrents and this is my final point if  
 15 you will bear with me, the development of nuclear  
 16 warfare is not deterring anybody -- North Korea, Iran,  
 17 you know -- it is not deterring anybody. So where the  
 18 United States could show the leadership is to be the  
 19 first in eliminating and cutting back the use of  
 20 nuclear weapons. Thank you very much.  
 21 MR. BROWN: Thank you. Okay. Peter Strauss  
 22 is next and then Grant Bakewell.  
 23 Let me suggest that we still have a number of  
 24 speakers. I don't know if any of them have other  
 25 obligations, but if they have to go, if you folks could

53/04.01  
cont.

54/32.02

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1 come closer to observing the five-minute mark, if you  
2 have remaining comments, what I would like to do is to  
3 get through the folks who have signed up within the  
4 five minute limit and if people have additional  
5 remarks, I will be glad to come back to you and let you  
6 complete the statement, but I think out of courtesy to  
7 those who signed up that I would like to try and stick  
8 a little closer to five minutes. Sorry to interfere.  
9 Peter.

10 MR. STRAUSS: Yes. I am Peter Strauss. I am  
11 environmental scientist and I have worked as a  
12 technical advisor for Tri Valley Cares for a number  
13 years. For the purpose of saving time I will  
14 concentrate on really two subjects, the accident  
15 analysis and the impacts on Site 300, but first I would  
16 like to ask the gentleman here that I noted reading the  
17 SWEIS that the groundwater and soil contamination at  
18 both the main site are given very little mention and it  
19 should not be over looked in your deliberations of that  
20 expanding programs at the Lab, both sites are for  
21 Superfund sites and commitments are made to state  
22 agencies, the EPA and the community about cleaning up  
23 existing contamination. What I'm concerned about is  
24 that as you increase programs, you are going to put  
25 strain on the cleanup budget and you are going to be

55/24.03

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1 paying -- you are going to be paying Peter to rob -- I  
2 got it the other way around -- but, you understand.  
3 For the accident analysis I have included, I  
4 have read through the whole thing and I really have  
5 concluded it's deficient and would considerably  
6 underestimate the consequences of a major accident.  
7 The Defense Nuclear Facility Safety Board which is a  
8 board set up by Congress has criticized Lab operations,  
9 historically, and most particularly at Building 332.  
10 Most recently in a letter in April of 2004 it  
11 criticized accident analysis methodology and I note  
12 that it recommended that the plutonium building being  
13 shut down because of safety concerns back in 1995,  
14 which it was, and in a letter from John Conway, its  
15 Chairman, on a number of criticality infractions at  
16 Building 332 raised questions as to whether DOE is  
17 staffed with the technical capabilities necessary to  
18 provide guidance and LLNL management appears not to  
19 recognize or fully appreciate all of the problems of  
20 hazardous work.

55/24.03  
cont.

56/25.06,  
25.07

21 One of the most startling things that I saw  
22 was that the airplane crash scenario in your accident  
23 analysis only assumes a small single engine aircraft  
24 would be involved in an accident. That overlooks  
25 commercial airlines; commercial jet airliners

57/25.08

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1 originating from San Jose; Oakland, San Francisco;  
2 Sacramento and military aircraft from Moffat Field and  
3 this needs to be recalculated and I assume that a large  
4 airplane crash would be the predominant accident at any  
5 of the buildings at the Lab including the 332 but I  
6 would like to see that analyzed.

57/25.08  
cont.

7 MR. BROWN: You are at the four minute mark.  
8 MR. STRAUSS: Only latent cancer fatalities  
9 are reported in the accident analysis. What about all  
10 the other kinds of illnesses that occur from a  
11 radiation accident? That is not recorded. You can't  
12 make any analysis of that. Building 332 has emergency  
13 diesel generators that provide power in the case of an  
14 emergency of the power supply and during the '90's five  
15 times during inspections they didn't operate. An  
16 accident scenario should include that and I notice that  
17 the Board that I mentioned earlier in 2002 said the  
18 staff observed a fundamental lack of understanding of  
19 system vulnerabilities in the Building 332 emergency  
20 power system.

58/25.06

21 I think that most of the things that I wanted  
22 to mention at Site 300 were mentioned, but one of the  
23 things that the accidents -- it doesn't appear that you  
24 considered a massive wild fire that cannot be  
25 controlled by a fire fighting capability that you have

59/17.07

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1 at present. That was brought up in another forum and I  
2 think it's of concern, of community concern, that it  
3 should be analyzed, at least analyzed. Thank you.

59/17.07  
cont.

4 MR. BROWN: After everybody is finished, if  
5 you have some remaining points, we will glad to let  
6 you --

7 MR. STRAUSS: I will send them.

8 MR. BROWN: Thanks, Peter. Okay. Grant  
9 Bakewell is next and then Ena Aguirre.

10 MR. BAKEWELL: Hi. My name is Grant Bakewell.  
11 I am a social worker, homecare worker and a job trainer  
12 for people with disabilities and most recently a  
13 chaplain at UC Medical Center in Sacramento. I am also  
14 a graduate of the UC Davis and a graduate theological  
15 union in Berkeley where for over 13 years we held a  
16 silent vigil twice weekly calling upon the conscience  
17 of UC and the community to end oversight of the  
18 Livermore and Los Alamos weapons laboratories or  
19 convert them to civilian use and that is the point that  
20 I would like to speak to today.

60/07.01

21 I will try and keep this brief for others as  
22 well, but last week I had the opportunity to hear Nobel  
23 Peace Prize Winner Desmond TuTu speak in Stockton just  
24 up the road about the success in Africa over the last  
25 ten years in turning a country that once was the source

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1 of an incredibly vicious and most people would say evil  
 2 system into a successful, democratic regime entirely  
 3 committed to equality and freedom for every human being  
 4 and completed this through an entirely nonviolent  
 5 process. This regime change, if you will, is now an  
 6 example for what the world can do when it comes to any  
 7 major in justice or unjust system of any government  
 8 anywhere.

9 In addition, at the end he cited the progress  
 10 of the truth and reconcile commission for people who  
 11 were once enemies and both victimizers and victims to  
 12 come to some sort of reconciliation with one another.

13 Finally, although he didn't note this, I would  
 14 like to note that the first action, to my knowledge,  
 15 public international action, although there may have  
 16 been others local to South Africa, that Nelson Mandela  
 17 made when he was President after he was elected, was to  
 18 abolish and dismantle the nuclear weapons arsenal that  
 19 is in South Africa.

20 I would submit to you that if this can be done  
 21 in a period of ten years when I would say even in the  
 22 '80's most people were thinking South Africa had no  
 23 hope for change, sort of a terribly violent so -- and  
 24 if the nation can do this not only successful regime  
 25 change nonviolently but also end and abolish their

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1 nuclear weapons facilities and potential, that sets an  
 2 example not only for the third world but also for us  
 3 and I would just like to close, if you will, by giving  
 4 you a copy of this book and I was thinking of giving it  
 5 to Phil because I probably will be able to communicate  
 6 at least with Tom by way of some little bit more  
 7 prepared statement that I had prepared today, but  
 8 Bishop Tutu called upon us to consider God's dream for  
 9 us as human beings and I would just like to encourage  
 10 all of us here and particularly those at the Lab to  
 11 consider what is God's dream for us? What is it for  
 12 you as individuals and what is it for us as a nation,  
 13 as a State and for the Lab itself. Is it to continue  
 14 with the same thing or is it to envision what the  
 15 Prophet Micah once said, the sword shall be beaten into  
 16 plowshares, spears into pruning hooks, nations shall  
 17 not lift up sword against nation neither shall they  
 18 learn war any more. Some people envision this as the  
 19 end time but I would say it is a vision that can be  
 20 realized in our time and at least to make progress  
 21 toward that dream to me is what is the good news that  
 22 you have as officials of this Laboratory in addition to  
 23 the bad news of what we have seen so much of in our  
 24 State and throughout the world as a result of these  
 25 terrible efforts so I encourage you to please consider

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1 this. Let me give it to you and thank you for your  
 2 time.  
 3 THE COURT: Okay Ena will be followed by Gary  
 4 Bailey.  
 5 MS. AGUIRRE: Good afternoon. My name is Ena  
 6 Aguirre. I am a member of the Board of Directors of  
 7 Tri Valley Cares. I would like to state that I became  
 8 involved in Lawrence Lab and Tri Valley Cares because  
 9 of Site 300.  
 10 As to the content of the draft site-wide  
 11 environmental impact statement on Livermore Labs  
 12 operations for the coming ten years. I am not an  
 13 expert. My comments are really a reflection of  
 14 documents that I have read and looked at from Tri  
 15 Valley Cares.  
 16 As to my recommendations, do not develop new  
 17 nuclear weapons. Do not vaporize plutonium. Do not  
 18 manufacture plutonium bomb cores. Do not import live  
 19 anthrax, plague and other deadly pathogens. Do not  
 20 double the plutonium limit. Do not manufacture  
 21 radioactive tritium, targets for NIF. Do not attempt  
 22 to create thermal nuclear explosions. Do not start the  
 23 process to conduct full scale underground nuclear  
 24 tasks. Do not mix bugs in bombs. No transportation of  
 25 nuclear waste. Do not test new manufacturing

61/04.01

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1 technologies for producing plutonium pits for nuclear  
 2 weapons.  
 3 At yesterday's Livermore hearing speakers  
 4 said: Addiction to nuclear weapons should not be the  
 5 basis for a jobs program. I concur with that statement  
 6 because the health and wellness of a lot of us is not  
 7 being taken into consideration when jobs become the  
 8 mantra and/or (inaudible) for the Lawrence  
 9 Livermore Lab. I would like to request that public  
 10 comment period be extended for 30 days and I believe of  
 11 the power of the individual. When the individual works  
 12 together with groups like Tri Valley Cares, we can, in  
 13 fact, make dramatic changes. Thank you.  
 14 MR. BROWN: Gary Bailey is next and Gail  
 15 Seymour.  
 16 MR. BAILEY: I am Gary Bailey. I live in  
 17 Sunnyvale California. I am a long time Silicon Valley  
 18 electronic engineering and manager. I led a team of  
 19 engineers a few years ago DSL systems for high speed  
 20 internet access and I would like to, before I put my  
 21 comments on my observation on the EIS, I would just  
 22 like to point out that following up on the earlier  
 23 speaker, I think when only comprised of crashes of  
 24 small planes are considered, it seems to me that full  
 25 risks of terrorist attacks probably have not been

61/04.01  
cont.

62/31.02

63/25.08

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1 adequately considered and I think maybe that -- I think  
2 that is something that should be added to the EIS  
3 thorough analysis of terrorist attacks which obviously  
4 as we know could be crashes of large planes and of  
5 course other kinds of attacks.

63/25.08  
cont.

6 I would like to preface my remarks by saying I  
7 recognize certainly the importance of maintaining the  
8 security safety and reliability of our nuclear weapons  
9 and that I would also like to applaud our President's  
10 widely publicized efforts to prevent the spread of  
11 nuclear weapons to more and more places in the world  
12 and I think in order to assure or hope for some success  
13 in that effort it is very critical that we maintain the  
14 credibility of the United States in that which has to  
15 include not embarking on research and development of  
16 new nuclear weapons because certainly how can we expect  
17 other countries to listen to us when we tell them not  
18 to develop their own nuclear weapons if we are  
19 developing more. The EIS, I have a couple comments,  
20 the whole world knows we have more nuclear weapons than  
21 we possibly need to protect our country from invasion,  
22 so I think it is absolutely not acceptable for there to  
23 be any increased exposure of the populus to radiation  
24 because of activities at Lawrence Livermore Labs and I  
25 think it is absolutely not acceptable for there to be

64/01.01

65/23.01

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1 any increase in cancer risks for the general populus  
2 because of activities at Livermore Labs. And  
3 furthermore I think is absolutely not acceptable for  
4 there to be any damaging effects on wild life  
5 especially the six species mentioned in the biological  
6 analysis that are mentioned as endangered and  
7 threatened so I recommend that the Department of Energy  
8 adopt an approach which prevents any possible exposure  
9 of the populus to radiation for increased cancer risk  
10 and any possible damage, further damage to wild life  
11 and their habitats. Thank you.

65/23.01  
cont.

12 MR. BROWN: Thank you. Gail Seymour and then  
13 Lynnett Eldredge.

14 MS. SEYMOUR: My name is Gail Seymour. I am  
15 trained as a classical pianist and I am not trained in  
16 public speaking at all but I was able to gather some  
17 thoughts.

18 I wanted to quote first from a book by Gopi  
19 Krishna, Page 9, Biological Basis of Religion and  
20 Genius. Ghandi taught a way of political struggle  
21 which ruled out any means not in keeping with the  
22 desired goal. He believed that a nonviolent state can  
23 be reached only by nonviolent means. But the linear  
24 causal manner of technological thinking sharply  
25 distinguishes between ends and means. The dissolution

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1 of reality into a network of causal chains is a  
 2 mistake. A culture which misunderstands reality that  
 3 way destroys the very reality it intends to control and  
 4 improve or liberate as in Fallujah.  
 5 I don't know, some famous person wrote a  
 6 statement that I kept in my mind and it is: We cannot  
 7 simultaneously prepare for and prevent war.  
 8 Also I've seen a bumper sticker, war is  
 9 terrorism with a larger budget.  
 10 And I just wanted to say, first of all, I  
 11 would like to go on record as seconding everything that  
 12 Marylia Kelley said because she knows what she's  
 13 talking about --  
 14 And I would also like to second the  
 15 recommendations of the Unity Chaplain from Palo Alto  
 16 because I am also a member of the Unity Church in  
 17 Sacramento just coincidentally --  
 18 And I care about the future of Livermore Lab  
 19 because I'm alarmed by the sort of legacy I am passing  
 20 onto today's newborns, let alone 7th generation from  
 21 now, if there is one --  
 22 And I am supposed to give specific  
 23 recommendations, so I think the Lab should be converted  
 24 to civilian research. There should be a recirculation  
 25 of a new draft SWEIS and I think one of the most urgent

66/07.01  
67/31.04

1 priorities in a new document would be to include a  
 2 detailed human environmental impact and a budget  
 3 describing in detail how they plan to adhere to current  
 4 international treaties. I think that is under  
 5 environment. And biological warfare research should be  
 6 stopped and I had just per chance a few of these things  
 7 that I think just should be stopped. I think plans to  
 8 build a modern pit facility should be stopped. I think  
 9 they should cancel experiments with plutonium in the  
 10 NIF. I think they should stop planning to build the  
 11 energetic materials processing center and such things  
 12 as people have already mentioned. Thank you very much.  
 13 MR. BROWN: Thank you. Okay, Lynnett  
 14 Eldredge.  
 15 MS. ELDREDGE: Well, I did not intend to speak  
 16 today and I have no prepared statement and I am not a  
 17 public speaker, but I wanted to go on record as  
 18 opposing what I consider a terrifying prospect and it  
 19 just seems like an endemic cultural insanity that could  
 20 have allowed this to get to this point.  
 21 I am a mother of three and a grandmother of  
 22 two and I am extremely concerned about the future for  
 23 our children 7 generations ahead even one generation  
 24 ahead. It's hard to imagine a world as toxic as we are  
 25 making it that will allow life for very much longer,

68/03.01

69/04.01

70/04.01

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1 certainly healthy life and one of the concerns that  
 2 came to me mind today from hearing the presentation  
 3 this morning is about the plutonium waste. They said  
 4 they were working on ways or looking into ways to  
 5 dispose of it safely and they don't have one and you  
 6 don't produce something that is going to be toxic for  
 7 thousands of years with no way to dispose of it and  
 8 just keeping making more and more and more -- that, to  
 9 me, is insane. And so I would recommend that there be  
 10 no more plutonium or tritium allowed at the Lab until  
 11 they have a way to make it harmless, which will  
 12 probably never happen, so I advocate the precautionary  
 13 principal -- in other words, if there is any risk at  
 14 all, you can't really calculate what it is. Accidents  
 15 are accidents. You can't really know what's going to  
 16 happen. We don't know everything. We cannot predict  
 17 with certainty what the odds are and any risk is too  
 18 much when you are talking about things as deadly as  
 19 plutonium, tritium and biological agents such as an  
 20 anthrax, plague, et cetera. The precautionary  
 21 principal would urge us to not allow this to happen; in  
 22 other words, you would not manufacture these things  
 23 without -- unless you could prove that they were safe,  
 24 which obviously, in this case, they aren't.  
 25 I am very concerned about just the ramped up

71/31.10

71/31.10  
cont.

72/02.01

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1 research of technology that's being proposed -- seems  
 2 to me to be very much in line with the current  
 3 administration's plan to expand our nuclear weapons  
 4 program and put nuclear weapons back on the shelf as a  
 5 viable alternative in warfare which should have gone  
 6 out with the Cold War but now we are the only ones,  
 7 supposedly, that can have them. We are once again  
 8 feeling safe enough to be able to use them so they are  
 9 back on the shelf because we have no fear of  
 10 retaliation.  
 11 MR. BROWN: Four minute mark.  
 12 MS. ELDREDGE. I think that is a very dangerous  
 13 step backwards. It makes the world much less secure.  
 14 How would we feel if we lived in another country and  
 15 there was a big country with all kind of money poured  
 16 into development of these weapons that they could use  
 17 on my country, especially if I had resources like oil  
 18 and how would I feel and what would I want to do? I  
 19 would want to defend myself. It does not make the  
 20 world more safe, it makes it less safe.  
 21 So I would urge that the site be converted to  
 22 civilian science purposes. I would suggest furthermore  
 23 that it were turned into a site for alternative energy  
 24 resource development. It could provide many jobs, the  
 25 spin-offs could be very -- a great economic boon to the

72/02.01  
cont.

73/03.01

74/07.01

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1 area. It could become a model for the whole nation and  
2 the world for responsible scientific development  
3 instead of a manifestations of cultural insanity.  
4 Thank you.

74/07.01  
cont.

5 MR. BROWN: Thank you. Josh Kearns and Marj  
6 Fries.

7 MR. KEARNS: All right. My name is Josh  
8 Kearns. I am an environmental scientist at the  
9 University of California Berkeley, the world's greatest  
10 manufacturer of weapons of mass destruction. I want to  
11 quickly highlight a few concerns that stuck out so far.

75/02.01

12 I recommend not producing any new nuclear weapons  
13 because likely they will want to test them in a site  
14 where most have been tested in the past, the Nevada  
15 Test Site which is an area in the Nevada desert North  
16 of Las Vegas larger than the state of Rhode Island, all  
17 of which used to belong to the Western Shoshone Nation  
18 but it was taken from them against their will by our  
19 government and used to test about 100 nuclear bombs  
20 atmospherically, above ground, and then about 8 or 900  
21 more underground, so technically the Western Shoshone  
22 are the most bombed people in the world.

76/07.02

23 So, I would like to reiterate the  
24 recommendation to convert Livermore and also Los Alamos  
25 Labs to civilian research goals, to do science in the

77/07.01

1 public interest; military science contrary to probably  
2 the beliefs of most people that work at the Labs which  
3 is not done in the public interest it is done in the  
4 interest of the ruling class in the military industrial  
5 complex. I think it is really important that we stop  
6 making nuclear waste, whether for power generation or  
7 for weapons because we don't know what to do with it.  
8 We don't have a tenable plan for disposing of it. We  
9 don't have a place to keep it and it is poisonous to  
10 all life for hundreds of thousands of years so I think  
11 that we should stop efforts to create more nuclear  
12 waste and put our efforts instead into figuring out  
13 what we need to do with our existing waste.

77/07.01  
cont.

14 I would like to reiterate the comment that a  
15 new environmental impact statement needs to be made and  
16 circulated incorporating criticisms that are brought  
17 out at these meetings. It seems like this current  
18 SWEIS is inadequate and it is really poorly put  
19 together and just kind of inapproachable from a regular  
20 person standpoint and probably the largest  
21 environmental impact of this SWEIS is the trees that  
22 had to be chopped down in order to print out all the  
23 copies.

78/22.02

79/31.04

24 Next to the last I want to mention kind of a  
25 concern from today's, I believe Chronicle, which the

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1 title of the article is Livermore Labs assailed for  
 2 holes in security. Investigators call radioactive  
 3 cache vulnerable. The first sentence says  
 4 Congressional investigators charged Tuesday that the  
 5 Lawrence Livermore National Laboratory, one of the  
 6 country's most sensitive nuclear facilities, can no  
 7 longer adequately protect weapons material from  
 8 potential terrorist threats.

9 So it seems like a bad idea to bring in more  
 10 plutonium and other hazardous materials when there is  
 11 inadequate security to make sure that a really bad  
 12 accident can occur and then finally, because I am a  
 13 scientist, and I got into science because I wanted to  
 14 help people and make people's lives better and reduce  
 15 the overall amount of suffering in the world. I want  
 16 to make a personal appeal to my colleague scientists  
 17 working at the University and working at Livermore Lab  
 18 and other weapons generating facilities, I just want to  
 19 make an appeal to your sense to consider the ethical  
 20 and social ramifications of the work that you do. I  
 21 think it is important that we consider that not just  
 22 the trajectory of our careers, not just achieving  
 23 success -- publications and all the meritocracy that we  
 24 are required to navigate in the system. I just ask  
 25 that lab employees do some soul searching and really

80/30.02

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1 ask themselves what they believe in and are they living  
 2 in a manner consistent with their values. That's all.  
 3 Thanks.

4 MR. BROWN: Marj and Sandra Schwartz is next.  
 5 MS. FRIES: For respected artists in Harkiev  
 6 in the Ukraine, especially to those of you who remain  
 7 vigilant about everything that goes on at Lawrence  
 8 Livermore Labs, I bring you greetings from the fourth  
 9 block, a distinguished triennial art exhibition which  
 10 was conceived in 1991 in memory of those who having  
 11 risked their lives saved the earth from the nuclear  
 12 nightmare of Chernobyl. I was just with one of those  
 13 artists last week here in the United States and it  
 14 brought these hearings close to home for me.

15 I am Marj Fries and I represent the readership  
 16 of the Connections Newspaper, the alternative newspaper  
 17 of San Joaquin County published since 1986 with a  
 18 subscriber list of 3,000 and a readership of double or  
 19 triple that. We strongly oppose the DOE proposal to  
 20 increase nuclear weapons programs at Livermore National  
 21 Laboratory. There is good reason for this concern as  
 22 San Joaquin County includes the cities of Tracy and  
 23 Stockton and is within the sphere of exposure to any  
 24 accidents that may occur there. Doubling the plutonium  
 25 levels housed at the Lab, increasing the Lab's tritium

81/02.01

82/04.01

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1 at risk level nearly tenfold and combining a bio  
2 warfare agent research facility with nuclear weapons at  
3 the Lab is definitely not in the interest of the health  
4 and welfare of local residents. Surely DOE is aware of  
5 the population growth rates in Livermore and Tracy and  
6 throughout the San Joaquin County during the past ten  
7 years. The alluring new community billboards lining  
8 the highways from here to Livermore fail to mention  
9 that new home owners and their families will face an  
10 increased risk of leaks, contamination and pollution  
11 from the Lab and its testing facility Site 300.

83/04.01

12 In fact, current risks to potential home  
13 owners is not advertised. Site 300 located in Tracy's  
14 western hills is currently being viewed by the DOE as a  
15 good place to save Superfund clean up money by  
16 evaluating the pollution which includes a plume of  
17 tritium in the aquifer only when it moves off site.  
18 Whether or not this phony proposal is adopted, testing  
19 continues at Site 300 causing further soil  
20 contamination. The proposed elevation of nuclear  
21 weapons research at the Lab will surely increase the  
22 use of the testing range at Site 300. The site, tucked  
23 back in the hollow 50 years ago, today in terms of risk  
24 and contamination borders an urban landscape. We are  
25 gravely concerned that the legacy of past research at

84/23.01,  
24.02

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1 the Lab has left our 50 mile radius neighborhood with  
2 low level radiation leaked into the Bay Area from LLNL;  
3 elevated levels of plutonium in playgrounds; long-term  
4 storage of thousands of pounds of nuclear waste and  
5 materials; elevated levels of skin cancer in  
6 Livermore's children and contaminated aquifers. Lest  
7 my comments be labeled NIMBY, let me stress that  
8 environmental and peace activist in San Joaquin County  
9 oppose extended nuclear weapons research anywhere in  
10 the world. We argue that the lack of environmentally  
11 secure storage or disposal of nuclear waste material is  
12 our greatest nuclear stockpile challenge. Therefore,  
13 we require that the US Government stop developing new  
14 and modified nuclear weapons which pollute our  
15 communities and endanger our health.

84/23.01,  
24.02  
cont.

16 MR. BROWN: Okay, Sandra Schwartz, welcome.  
17 MS. SCHWARTZ: Thank you. My name is Sandra  
18 Schwartz. I work for the American Friend Service  
19 committee which is an international organization with  
20 programs in 42 states in 37 countries. We won the  
21 Nobel Peace Prize, are recipients for Nobel Peace Prize  
22 for our work for cleaning up after World War II and  
23 many of our programs around the world are still based  
24 on cleaning up the messes left over from war.  
25 And I came here today because clearly, I mean,

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1 I looked at this, and I am like: This is such a  
2 no-brainer. This is so easy. Clearly, Livermore Labs  
3 should not be engaged in developing new nuclear  
4 technologies. They should not be engaged in developing  
5 new nuclear weapons. This is like easy, right? It's  
6 easy; but, obviously, it's not that easy for you guys,  
7 and I appreciate that you probably do want to do these  
8 things as safely as possible; but, obviously that  
9 hasn't been true.

10 So, again I came to remind you that the  
11 solutions lie in nuclear disarmament and abolition of  
12 nuclear weapons and that we are obligated by treaty, we  
13 have treaty obligations, for example the  
14 Non-proliferation Treaty as well as the Test Ban Treaty  
15 but when I got here and looked at your slides I really  
16 got extremely angry. I mean, you are talking about,  
17 you know, it is just like written down here as if it is  
18 no big deal that there would be increased plutonium  
19 storage in Super Block. There will be increased  
20 plutonium material at risk limits in two rooms in the  
21 plutonium facilities. There will be increased tritium  
22 facility limits, there will be more exposure to people  
23 because of the transportation of nuclear materials  
24 across States and across the State.

25 And then you go on to say that the worker

85/02.01,  
01.01,  
04.01

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1 population dose could increase and then you say that  
2 the increase of cancer -- and then you talk about the  
3 increase of radiological exposure -- and I am wondering  
4 how many of you have walked the dark lonely path of a  
5 dear, beloved family member who has cancer? How many  
6 of you have been with that person as you see them go  
7 from this vibrant person who is alive and loves life to  
8 this withered person with bones covered by skin and  
9 sees them stick their little arm out to get the needle  
10 to get a little more chemotherapy as they struggle to  
11 live and watch them and hold their back as they puke  
12 their guts out because they are so sick and you talk  
13 about it, and it's like, it is an increased possibility  
14 of cancer. I don't understand that how that's  
15 possible.

16 I don't understand how anybody would think  
17 that even one more person suffering would be willing to  
18 take that kind of risk. And so I would ask you -- I am  
19 sorry --

20 I think that obviously conversion to civilian  
21 uses is the best opportunities for the future. I heard  
22 the Chamber of Commerce person talking about how many  
23 jobs the Labs provide; but clearly, if the Lab were to  
24 convert to civilian uses, there would be as much  
25 opportunity, economic opportunity for civilian purposes

86/07.01

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1 as for military purposes. To poison the community for | 86/07.01  
 2 money is absolutely morally abhorrent and you know | cont.  
 3 that. The scientists and engineers currently employed  
 4 at the Lab could be employed for decades just trying to  
 5 figure out how to clean it up. And the jobs in the  
 6 surrounding communities could also be -- continue in  
 7 the process of cleaning up the mess. And, you know,  
 8 that's basically what I have to say.

9 MR. BROWN: That concludes the list of folks.  
 10 who signed up to speak ahead of time. Let me ask if  
 11 there is anybody in the audience who hasn't spoken yet  
 12 who would like to take this opportunity add any  
 13 comments. Okay. Is there anybody who did speak who  
 14 felt hurried by the five-minute limit and would like to  
 15 amplify their remarks? We have a volunteer. Please  
 16 step forward.

17 And again, if you can identify yourself and if  
 18 you have an organizational affiliation, that is fine to  
 19 add that.

20 SPEAKER: I have no organization affiliation,  
 21 but I will tell you where I'm coming from: I am a  
 22 retiree from working on bombs for close to 50 years now  
 23 and they are pretty wicked and you have only seen the  
 24 tip of the iceberg when you worry about the cancer.

25 Now I'm not suggesting that you not worry | 87/23.02

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1 about cancer, because it is very serious; but, if you  
 2 had your blood tested, looking for disetrics, you would  
 3 find that the threat of cancer is only the tip of the  
 4 iceberg of the genetic damage done by tritium and  
 5 plutonium. Most of the serious threat at this facility  
 6 is tritium which they downplay and act as if it is like  
 7 dirty water, at most.

8 Any additional exposure to man-made radiation  
 9 is an additional threat which has to be added to the  
 10 natural one. And this business of referencing how good  
 11 I am compared to background radiation is like telling  
 12 you whether the glass is half full or half empty. Any  
 13 addition of radiation is dangerous -- any. There is no  
 14 safe dose. One alpha particle can add to -- since you  
 15 seem to worry about cancer -- one of the many DNA  
 16 faults which make up a multifactorial requirement to  
 17 cause cancer. There are many diseases that are genetic  
 18 diseases that are caused by one single event known as  
 19 single point damages. The list of these single point  
 20 damages can fill an even encyclopedia about this wide  
 21 right now (indicating). They are so -- they occur so  
 22 infrequent and they have an obscure name and you don't  
 23 realize how important they are. Right now there is  
 24 enough tritium released at this laboratory if the  
 25 California Prop 65 people had enough gumption to put

87/23.02  
cont.

88/16.01,  
34.01

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1 tritium on their list, it would be required that all  
2 the current wines produced in the Tri Valley area have  
3 a lethal dose danger label on it. This has been known  
4 since the 70's. It was work done by Abbott, Mix at the  
5 University of Oregon and if you take their numbers and  
6 work it through with the definition of Prop 65 of  
7 interfering with proper development or growth of  
8 children, you take and divide it by ten based on the  
9 animal that you found that you don't -- you don't  
10 experiment on people anymore -- you divided the number  
11 by ten and the basis of individual variations within  
12 that species. Then you add an additional species  
13 variation because I tested on a rat instead of people.  
14 You can't test on people anymore. That is where the  
15 100 comes from. When you divide the lowest limit that  
16 you detect doing damage to the experimental animal,  
17 that is where you have to divide that number by ten and  
18 if it is above that you should post it.

88/16.01,  
34.01  
cont.

19 I don't see any representative from the wine  
20 industry in this valley here today.

21 MR. BROWN: You are at the four minute mark if  
22 you can conclude in a minute or so.

23 SPEAKER: Okay. Let's see one more. An  
24 interesting irony of this whole thing is that this  
25 laboratory is what pulled the rug on Rocky Flats, the

89/37.01,  
24.01

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1 producer of pits before they closed down. Now they  
2 have to make that thing a glow in the dark a wild life  
3 refuge. How did that happen? It turns out that people  
4 objected to plutonium in the Boulder area for many,  
5 many years knowing that it would get out but they had  
6 clever con men and trained attack dogs to cover them  
7 up. It turns out that someone found tritium leaking  
8 out of the fence at Rocky Flats and all of them stood  
9 on a stack of Bibles this tall and -- can't be, we  
10 don't handle tritium here. What has happened is that  
11 this Livermore Lab has sent them contaminated plutonium  
12 without telling them it was loaded with tritium and  
13 that's what got the attention of the State and of a  
14 number of other people. Then since they then got the  
15 attention of so many people, they got shut down. Now  
16 they are spending millions of dollars for cleanup; but  
17 it is interesting -- now -- so it is sort of ironic,  
18 but now the plutonium pit business has come back to  
19 Livermore, which already has the tritium, which was  
20 really the step that essentially pulled the rug in  
21 Rocky Flats in Colorado.

89/37.01,  
24.01  
cont

22 MR. BROWN: Okay. Well, thank you.  
23 SPEAKER: Anyway, there is no safe dose, even  
24 a single radioactive event biologically, if it is a  
25 rock, fine; but, it even damages the metal and the

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1 material structures in power plants. This is one of  
 2 their nightmares, is the radiation damage of the  
 3 structural steel and ceramics in power plants.  
 4 MR. BROWN: Thanks very much.  
 5 MR. BROWN: Thank you all for coming. That  
 6 concludes the public comment period. There is another  
 7 meeting this evening. If there are other members of  
 8 the community you know would like to comment, the  
 9 meeting begins here at 6:30, the same format. Thanks  
 10 again for coming and we are adjourned.  
 11 (Whereupon, the hearing was concluded.)

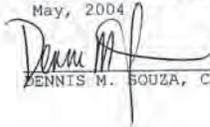
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1 STATE OF CALIFORNIA I  
 2 ) ss.  
 3 COUNTY OF ALAMEDA )  
 4  
 5

6 I hereby certify that the public hearing  
 7 was taken at the time and place therein named; that the  
 8 comments of the said speakers was reported by me, a  
 9 duly Certified Shorthand Reporter and disinterested  
 10 person, and was thereafter transcribed into typewriting  
 11 under my direction.

12  
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WITNESS WHEREOF, I have  
 hereunto subscribed my  
 hand this 14th day of  
 May, 2004

  
 DENNIS M. SOUZA, CSR No. 3893

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1 LAWRENCE LIVERMORE NATIONAL LABORATORY  
 2 SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT  
 3 US DEPARTMENT OF ENERGY  
 4 NATIONAL NUCLEAR SECURITY ADMINISTRATION  
 5 ---oOo---

6  
 7  
 8 APRIL 28, 2004  
 9 EVENING PROCEEDINGS

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1 Tracy, California April 28, 2004  
 2 MR. BROWN: Let me call on our first speaker.  
 3 Bernice Turoff is first and Paula LeVeck is  
 4 signed up next.  
 5 MS. TUROFF: I think the major concern from the  
 6 people who live around the Livermore Lab are that --  
 7 quote concerns are that terrorist attacks might take  
 8 place in that area and according to the newspaper, unlike  
 9 the security forces of weapons sites, Livermore personnel  
 10 do not have certain high powered weapons, durabreaching,  
 11 explosives or helicopters to defend the site and it goes  
 12 on the talk in the news story, about how inadequate the  
 13 preparations are for an attack, for a terrorist attack on  
 14 the site.  
 15 But it was also quoted as saying that this is the  
 16 site that is in the -- closest to large groups of people  
 17 who live close, right near the site, unlike many of the  
 18 other sites that are out in a desert, in the mountains or  
 19 in places relatively uninhabited. I am looking around  
 20 and seeing that there are very few people from Stockton  
 21 here and I guess the further you get away from  
 22 Livermore Lab the safer you feel and I don't know why  
 23 that would be when as we were coming over from Stockton  
 24 to Tracy the breezes were very powerfully coming from  
 25 Livermore Lab right over our heads and going through into

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1/30.02

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1 the valley and certainly into Stockton. So I think a  
2 lot more people should be concerned who aren't and who  
3 aren't here to talk about it.

4 And I am also concerned with the impact that  
5 we be having on the decisions. I doubt very much  
6 whether we are going to be listened to. It is not a  
7 vote. It is not something you can say well, do you  
8 want it in your community and have the people in their  
9 community voting on whether they want it there or not.  
10 They will find answers for all of our questions and  
11 they will give us quotes about the impact.

12 Whether you can believe what they say or not  
13 is kind of something I think we should explore. When  
14 911 happened in New York, the health people were quite  
15 clear that the air was not healthy to breathe in and  
16 the people in New York were told, don't worry about it,  
17 it is just okay. We will take care of you, don't  
18 worry. It's not a problem. And I have a feeling that  
19 when we are listening to things today we are hearing  
20 the same thing. The increase in cancer is an  
21 environmental thing and I am sure, although I can't  
22 prove it and I have no scientific evidence for it, that  
23 these kinds of facilities as well as the smoke that  
24 comes out of the electrical plants all have their  
25 contribution toward the increase in cancer and -- I

2/31.02

1 guess that's it.

2 MR. BROWN: Thanks very much. Paula LeVeck.  
3 And Ria de Groot is next.

4 DR. LEVECK: My name is Dr. Paula LeVeck and I  
5 reside in Stockton. I speak as a contributing and  
6 active member of the Peace and Justice Network of San  
7 Joaquin County; of Physicians for Social  
8 Responsibility, of International Physicians for the  
9 Prevention of Nuclear War; for The Union of Concerned  
10 Scientists and several other organizations. These  
11 organizations renounce the first strike use,  
12 development and testing of nuclear weapons and strive  
13 for the ultimate elimination of nuclear weapons. The  
14 proposal to one, increase the supply of plutonium at  
15 the Lab; two to design technologies for producing  
16 plutonium bomb cores, three, to heat plutonium and  
17 shoot multiple beams through the vapor cloud, four, to  
18 use plutonium in National Ignition Facility experiments  
19 and to perhaps add biological warfare research to the  
20 mix to name a few features is abominable and should be  
21 unthinkable. We still have thousands of nuclear  
22 weapons. They cannot be used. Unless we intend to  
23 destroy many times over what the use of a few would  
24 have already destroyed. They are useless to counteract  
25 or fight terrorism because they are weapons of mass

3/04.01

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1 destruction, not of the destruction of individuals or  
2 groups.

3 Radiation does not distinguish between the  
4 good guys and the bad guys. It affects everyone and  
5 all living things. Nuclear weapons research does not  
6 belong in our backyard. A metropolitan area of seven  
7 million residents that is rapidly increasing in number.  
8 It doesn't belong in anyone's backyard, no matter how  
9 deep underground or how far away in the desert, it  
10 affects everyone and all living things. It doesn't  
11 belong anywhere on the planet earth.

12 Regardless of the attempt to reassure us  
13 regarding environmental and health impact projections,  
14 I am opposed along with numerous members of the  
15 organizations to which I belong to any further research  
16 on or development or testing of nuclear weapons here or  
17 anywhere, ever. Convert the Lab to purposes that  
18 guarantee the future health and well-being of human  
19 kind, not its demise. Thank you.

20 MR. BROWN: Ria de Groot and Greg Getty is  
21 next.

22 Ms. de Groot: My name is Ria de Groot and I  
23 come here also from Stockton -- down wind. I  
24 represent -- come also from The Peace and Justice  
25 Network in Stockton; the Pax Christi Group in Stockton

3/04.01  
cont.

4/07.01

1 and the Grail National Organization that I belong to.

2 I believe in citizen experts and citizen  
3 experts come in many forms and especially today citizen  
4 experts that care for the preservation of the earth. I  
5 am a teacher of young children, second and third  
6 graders. I am a parent and grandparent of 14 -- both  
7 young and adults. I am an immigrant and was part of  
8 that time period when there was the occupation of the  
9 Nazis in the Netherlands. I am a victim of war. I am  
10 a survivor of war. Bombs were flying all around us.  
11 Windows, roofs periodically damaged, blown off. Many  
12 people dying in the streets.

13 I am a citizen of Stockton, as I said. I am a  
14 grateful citizen of the United States of America. I am  
15 also, along with all the multinational corporations, a  
16 citizen of the world.

17 At 59 years of age, I know something. I know  
18 what safety looks like. This is not safe. To store  
19 1540 pounds of plutonium and to increase that to 3300  
20 pounds -- or as today on the overhead it was stated as  
21 700 kilograms, moving it up to 1500 kilograms of  
22 plutonium here at Livermore Lab. It's not safe to  
23 build more nuclear war heads and to manufacture the  
24 prototype plutonium nuclear weapons and bombs and the  
25 cores on this site. It is not safe to manufacture them

5/33.01

6/37.01

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1 here. It's not safe to store them here.  
2 And as we know, war is not safe for the  
3 military, which it has never been safe for those who  
4 are fighting; but, it is also not safe for citizens and  
5 increasingly so. It was not safe in my country;  
6 citizens were dying all the time. It's not safe for  
7 citizens in Iraq, Afghanistan, and other countries  
8 where war continues.

9 We have to keep remembering what the final,  
10 final goal is of the production of these items. The  
11 final goal is to either use them or to store them -- to  
12 use them means death; to store them means possible  
13 radiation into the air which also, as we heard from the  
14 other speakers, is an increase in the potential for  
15 more cancer to our loved once.

16 I beg my government not to use our precious  
17 tax money and our other resources on this kind of  
18 activity, this kind of production.

7/03.01

19 MR. BROWN: You are at the four minute mark  
20 now.

21 MS. De GROOT: I gladly pay my taxes for the  
22 common good, for health care, housing and jobs; but, I  
23 oppose, I oppose the production of an increase as well  
24 of these kinds of manufacturing and storing of tritium  
25 and plutonium here at Livermore Lab and I challenge

8/33.01,  
34.01

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1 each one of you here who is in an official capacity to  
2 stop -- and yes to stop and choose not to participate  
3 in this madness and to clean up the mess that exists,  
4 rather than to propose new polluting projects.

8/33.01  
34.01  
cont.

5 And I ask: Where are the women? The women?  
6 It is not only women that care for the earth, men do as  
7 well, but where are the women from Livermore Lab who  
8 can maybe speak to a little more care for the earth.

9 MR. BROWN: Greg Getty and Patricia Moore will  
10 follow.

11 MR. GETTY: Dear DOE chief. In 1996 the  
12 International Court of Justice put an end to any  
13 substantial legal question about the mass murder being  
14 discussed here today. If we are not all to be  
15 complacent with the crime, should not the honorable  
16 representatives proposing that we consent to  
17 radioactive forms of mass murder being perpetrated on  
18 our behalf be challenged for their participation and  
19 made to answer for charges of 182, 187 California  
20 Vehicle Code violation, conspiracy to murder.

9/32.02

21 If the US Attorney General will not act on the  
22 Title 18 Section 1116, 1117 violation, conspiracy to  
23 murder internationally protected persons and  
24 specifically as a Title 18 violation, can you assure me  
25 you will forward this information and complaint to the

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1 US Attorney General as required under the Ethics and  
 2 Government Act, section 535B of Title 28 dated 4-27-04, 9/32.02  
 3 Greg Getty, care of Nuremberg Actions, P.O. Box 1637, cont.  
 4 Pittsburg, California 94565. (925)746-1168.  
 5 So that was the written comments I submitted  
 6 yesterday and I, I belabor the point about having this  
 7 reported because ten years ago I made comments to the  
 8 environmental impact report in Concord about the  
 9 nuclear waste shipments through there and my comments  
 10 were not included in the environmental impact report.  
 11 So let me repeat the question I made to the State  
 12 Department spokesman when I asked: How can you ask us  
 13 to accept this deadly threat when you won't do the  
 14 simplest thing which is just lift your finger and say  
 15 that nukes are wrong and he responded saying: We want  
 16 to be sure they are safe and I hate to say it that they  
 17 will work.  
 18 And I said and you give a green light to  
 19 everybody out there that is gonna do to us what we did  
 20 to Hiroshima and Nagasaki. You give them a green light  
 21 when we could put them in chains. Anyone that steps  
 22 foot in any civilized country who carries around  
 23 anyone of these obviously criminal things would be  
 24 thrown in jail if you did the simplest thing which was  
 25 lift your finger and say that was wrong.

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1 And the State Department person responded as I  
 2 said we can agree to disagree on the basic function,  
 3 but we want to be sure that they work.  
 4 And I said you are still willing to murder  
 5 babies to protect your interests.  
 6 The moderator said can we stay focused?  
 7 So just one last little thing. Nuclear  
 8 weapons and power depend upon unstable atoms. All of  
 9 us living things depend on stable atoms. So radiation  
 10 is evil incarnate, really.  
 11 I have lived for, like, 15 years at the  
 12 weapons station in Concord and I got Melanoma cancer  
 13 and I don't know if it is from living in Pittsburg down  
 14 wind from Building 81 where they put the tritium in the  
 15 H-bombs where there is a cancer cluster, a melanoma  
 16 cancer cluster. I think that's where I got it because  
 17 Jim Wilcot and Melee Scott died of colon cancer which  
 18 they might have gotten from the radiation at the tracks  
 19 and there are other folks from the tracks that died of  
 20 cancer but this one in a million business is pretty  
 21 funny.  
 22 MR. BROWN: Thanks very much. Patricia Moore  
 23 and Marylia Kelley is next.  
 24 MS. MOORE: Okay. My name is Trisha Moore. I  
 25 am a resident of Livermore. I couldn't make it to the

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1 hearings yesterday. I am a member of Tri Valley Cares.  
2 I am a medical social worker and I worked eight years  
3 in outpatient hospice organizations. I have worked as  
4 a counselor with many hundreds of dying patients and  
5 their families. My concern today is with environmental  
6 toxicity, specifically radio activity and its impact on  
7 human health. As a health care worker, I have  
8 witnessed the ravages of terminal illness on children,  
9 teens and young adults and have had to question why so  
10 many people are suffering and dying prematurely. Many  
11 times my patients suspected that they had developed  
12 their disease due to toxic exposure such as agent  
13 orange, agricultural pesticides, chemicals or  
14 radiation. But they were not able to prove their  
15 cases.

16 Given the overwhelming evidence of the health  
17 hazards of radioactive substances I am shocked by  
18 Livermore Lab's ten year plan to increase the  
19 administrative limit of plutonium by 100 percent: to  
20 revive the plutonium vaporization project; to  
21 manufacture tritium targets and to increase by tenfold  
22 the lab's day to day work with tritium.

23 It is known that a person inhaling a few  
24 micrograms of plutonium, just a microscopic amount, is  
25 likely to develop fatal lung cancer ten to twenty years

10/04.01

11/23.02

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1 after exposure. At some point the cells damaged by  
2 alpha radiation begin to multiply uncontrollably. If  
3 we were subject to a serious earthquake, a terrorist  
4 attack, an accident on the part of a worker or a  
5 highway accident, the extremely combustible plutonium  
6 which is also subject to spontaneous combustion could  
7 burn and would produce tiny aerosol particles of  
8 plutonium which can easily enter and lodge in the  
9 lungs.

10 Livermore is a city, in an area of enormous  
11 population growth with many housing developments  
12 springing up all around the Lab. This is also a  
13 thriving agricultural region of grapes and cattle,  
14 olives and wine. How can the DOE and the Lab even  
15 consider ramping up programs with known carcinogens  
16 that can never be disposed of and that take 240,000  
17 years to decompose. Integrated technology project  
18 states that there will be a greater amount of material,  
19 use, storage and transportation of plutonium. Right  
20 here near the population center of 7 million people, as  
21 some someone already mentioned.

22 Tritium is much more radioactive than weapons  
23 grade plutonium and apparently the gas can escape  
24 easily during routine operations or if there were an  
25 accident. When released into the environment it binds

11/23.02  
cont.

12/27.01,  
33.01

13/34.01,  
23.02

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1 to water molecules and becomes biologically toxic.  
 2 Tritiated water H2O is a common chemical state  
 3 of tritium and according to the National Academy of  
 4 Science It has easy and rapid access to cells including  
 5 those of the embryo or fetus. According to the NAS  
 6 study of low level ionizing radiation, tritiated water  
 7 induce significant decreases in relative weights of the  
 8 brain, testes and ovaries when exposure began at the  
 9 time of the mother's conception. Even low exposures,  
 10 this is .003 rads per day, were implicated in the  
 11 induction of behavioral change such as delayed  
 12 development of the writing reflex or balance and  
 13 depressed spontaneous activity.

14/34.01,  
23.02  
cont.

14 I am not a scientist. I am interested in the  
 15 studies and I have consulted with scientists and there  
 16 will be references in my letter at the end of my  
 17 written material but there is also evidence that low  
 18 level radiation from tritium can interfere with the  
 19 human master code mechanism for DNA and so far there is  
 20 no indication that this master code mechanism has an  
 21 ability to repair itself when damaged by tritium.  
 22 Further it has been shown that tritium interferes with  
 23 cell membrane systems. So the Lab already had two  
 24 large accidental releases during the Cold War and there  
 25 is evidence even in your reports that there are higher

15/23.01

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1 than normal levels of tritium in local grapes and wine.  
 2 It is illogical to assure us of our safety given the  
 3 history of the Lab's spills releases and leaks and  
 4 accidents will always happen. I believe that manmade  
 5 radioactive pollutants in the environment must be  
 6 minimized to ensure a healthy future for the earth's  
 7 inhabitants. Research shows that cancer is only the  
 8 tip of the iceberg for the genetic damage done by  
 9 ionizing radiation.

16/16.01

17/23.02

10 MR. BROWN: Four minute mark.  
 11 MS MOORE: It is well know that radiation is a  
 12 cofactor in many disease especially those diseases  
 13 which are induced by free radical damage. Radiation  
 14 exposure also accelerates the aging process. According  
 15 to the late John Goffman from Livermore Lab, no safe  
 16 level of radiation exposure of exists although the EPA  
 17 and NRC have set up working standards.

18 The Lab is already a Superfund cleanup site  
 19 which the current US Administration wants to downplay  
 20 and there are currently 900 to 1,000 pending health  
 21 claims against DOE from workers at Livermore Lab. My  
 22 work with hundreds of dying people and their families  
 23 made me realize how short our lives are and how fragile  
 24 and precious life is. Why are we here on earth? And  
 25 what is most important? There are great minds and

18/23.04

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1 talents in the scientific community. Let's turn the  
2 focus away from generating more toxic and radioactive  
3 pollution, away from unnecessary diseases and health  
4 problems, away from global nuclear proliferation and  
5 toward the resolution of a serious global problems that  
6 face us.

10/04.01  
cont.

7 Please consider revising the alternatives  
8 analysis to include conversion of the facility to  
9 civilian sciences and to the cleaning up of the  
10 existing radioactive materials. Thank you.

19/07.01

11 MR. BROWN: Marylia and Bob Say, I believe is  
12 next.

13 MS. KELLEY: I am Marylia Kelly. I am  
14 executive director of Tri Valley Cares. I live in  
15 Livermore on East Avenue about a quarter mile from the  
16 Laboratory's main site. I have spoken about several  
17 things, tonight I am going to concentrate on the  
18 accident analyses that you saw and then a couple of the  
19 programs involved with the increases in nuclear  
20 materials planned for the Lab; but, before I start, I  
21 need to say, Tom, that I know during the scoping  
22 comments members of my organization specifically said  
23 that the health and safety of the workers is part of  
24 the NEPA review, must be part of the NEPA review and  
25 should be part of this document and I want to reiterate

20/23.03

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1 that here. Tri Valley Cares represents 4200 local  
2 residents and some of them are workers at  
3 Livermore Lab.

20/23.03  
cont.

4 The bounding accident, which you saw up here  
5 for the plutonium facility, Building 332, that  
6 unfiltered room fire, has a lot of assumptions that are  
7 behind it. One is that the airborne release fraction  
8 will be 0.0000, four zeroes, and then 5. Also there is  
9 an assumption of what is called the leak path factor,  
10 which I am going to just call leak path, because you  
11 can't say those three words together, is five percent.

12 So I began to look to see whether or not those  
13 are reasonable assumptions. Has anyone looked at this?

14 And I found in March, last month, the Defense  
15 Nuclear Safety Board indeed looked at the Laboratory's  
16 methodology offered in determining the consequences of  
17 accidents in the plutonium facility and for those that  
18 don't know the DNFSB they are chartered by Congress to  
19 do oversight of nuclear activities in defense  
20 facilities like the Department of Energy is Livermore  
21 Lab. So they looked at this path analysis and found  
22 the model fails to account for the additional leak  
23 paths that would result from the use of emergency exit  
24 doors by the plutonium facility personnel as they  
25 evacuated the facility during the fire. The DNFSB says

21/25.07

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1 evacuation is essential for worker protection as  
 2 described in the facility specific fire hazard  
 3 analysis. Of course we want the workers to leave the  
 4 facility and of course when the door opens,  
 5 radioactivity will be released. So they essentially  
 6 forgot to model that in their calculations. Therefore,  
 7 says the DNFSB, the calculated leak path factor of 5  
 8 percent is unrealistic.

9 I am going to summarize because otherwise I  
 10 will run out of time. Then they went on to say that  
 11 these calculations of consequence from these accidents  
 12 in the plutonium facility are based upon a fire  
 13 scenario that lasts only for a short period of time and  
 14 they forgot to include the radioactive emissions that  
 15 would get out of the facility over the subsequent days.  
 16 So basically, they are calculating that nothing will  
 17 get out of the facility so of course it is not gonna  
 18 hurt anybody and what the Defense Nuclear Facility  
 19 Safety Board is saying is that they are using very  
 20 unrealistic calculations, here. The computer program  
 21 manual, this is also DNFSB, used to calculate the leak  
 22 path factor, this model is called Contained, has  
 23 cautionary notes with regard to its use for modeling.  
 24 These notes recommend performing sensitivity analyses  
 25 on important input parameters, for example, the size of

21/25.07  
cont.

1 a time step, to prevent incorrect conclusions. Such  
 2 sensitivity analyses have not been performed in support  
 3 of the leak path calculation, says the Defense Nuclear  
 4 Facility Safety Board,

5 So we have to say that in this site-wide  
 6 environmental impact statement DOE must redo those  
 7 calculations and must recirculate the document for  
 8 public comment with the redone calculations.

9 With respect to the plan to increase the  
 10 storage limit for plutonium, I want to put it into  
 11 pounds for people who don't work in kilograms. The  
 12 current limit is 1540 pounds. The plan is to increase  
 13 it to 3300 pounds. Now, in 1992 the Department of  
 14 Energy produced a site-wide environment impact  
 15 statement that stated the administrative limit is 1540  
 16 pounds but that document contained a pledge to reduce  
 17 the inventory in the plutonium facility and reduce,  
 18 therefore reduce the plutonium on site which made  
 19 sense, the close of the Cold War, Livermore was no  
 20 longer fabricating prototype triggers for its nuclear  
 21 test shots in Nevada -- in 1992 the Nuclear Test  
 22 Moratorium Act -- so we expected to see that the amount  
 23 of plutonium would go down. In 1999 the  
 24 Department of Energy did a supplement analysis to that  
 25 site-wide EIS and kept the 1540 pound limit. And by

21/25.07  
cont.

22/33.01

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1 the way, the government had been doing so-called  
2 stockpile stewardship for years by the time 1999 came  
3 around.

22/33.01  
cont.

4 So the question is what's new today that  
5 causes the proposed action to be -- to more than double  
6 it.

7 MR. BROWN: You are at about the four minute  
8 mark.

9 MS. KELLEY: All right. So I am going to talk  
10 about a couple of these programs but I do think that  
11 the document needs to more explicitly deal with that  
12 question.

13 What's new? Livermore Lab it says is going to  
14 be the place where we fabricate -- I am sorry, where we  
15 prototype pits for the modern pit facility that's  
16 planned. So Livermore is going to develop the  
17 technologies that will be used in the new modern pit  
18 facility which is essentially the new Rocky Flats. In  
19 my written comments, I am going to go into a lot more  
20 detail about that, because that program's actually been  
21 held up by the DOE and by Congress. So Livermore is  
22 jumping the gun by proposing to go forward with the  
23 technology for that facility and this document needs to  
24 be very specific, how many hemi-shells or pits are  
25 going to be prototyped -- you know -- how many

23/37.01

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1 prototypes of pits and hemi-shells are actually going  
2 to be manufactured at Livermore under this proposed  
3 action? It doesn't say that. I know in the mid-90's  
4 when they were playing with the tilt pour furnace for  
5 the net casting, they were producing prototype  
6 hemi-shells. Exactly what are they going to be doing?  
7 How many are going to be produced.

23/37.01  
cont.

8 They are also planning to revive plutonium  
9 atomic vapor laser isotope separation. That's been  
10 discussed very briefly but that's one of the reasons  
11 why they are going to raise the at risk limit for  
12 plutonium, how much you can use in a single processor  
13 room three fold from 44 pounds to 132 pounds -- again  
14 for those of you who don't do kilograms, that's what we  
15 are talking about, and we are talking about a feed  
16 stock of 220 pounds of plutonium per year, just for  
17 this plutonium atomic vapor laser isotope separation  
18 which is called the integrated technology project in  
19 the document and much of that's going to be in the form  
20 of powdered plutonium oxide and they are going to  
21 convert it into a metal first, you have to, in order to  
22 vaporize it, in order to shoot the laser beams through  
23 it and ionize out the isotopes and that conversion  
24 process can be quite ugly and the consequences of that  
25 are not at all detailed in this document and there are

24/27.01

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1 several different ways to do it and I think you are  
 2 going to try direct conversion but you haven't ruled  
 3 out a fluoride process, you haven't ruled out a number  
 4 of things and I would like to see a lot more detail in  
 5 this document and they are going to use plutonium in  
 6 the National Ignition Facility mega laser, something it  
 7 was promised would not happen back in 1995, which is  
 8 why the Department of Energy did not analyze that when  
 9 it did its non-proliferation review of the National  
 10 Ignition Facility. This is going to increase NIF's  
 11 hazard to workers. It specifically says workers will  
 12 get doused putting in and taking out the special little  
 13 target chamber they have to build to go inside the  
 14 bigger target chamber and every shot they have to build  
 15 another one, every fission shot they have to build  
 16 another one and it has to be taken to the Nevada Test  
 17 Site and be buried as waste and every shot. Basically,  
 18 this moots the non-proliferation review. They need to  
 19 do a new one. It needs to be in this document. It  
 20 needs to be with other non-proliferation reviews  
 21 including plutonium AVLIS and it has to be recirculated  
 22 to the public so it can be commented upon before these  
 23 decisions become final.

24/27.01  
cont.

25/26.01

26/01.01,  
31.04

24 MR. BROWN: Okay, thank you. Bob Say, if I  
 25 have that right. Okay, and Jack Cameron will follow

1 you.  
 2 MR. SARVEY: My name is Bob Sarvey. I am a  
 3 resident, I am a businessman in the City of Tracy and I  
 4 am a little confused. I have been reading in the  
 5 papers that the Department of Energy is stating that  
 6 the risk of storing plutonium in Livermore is too high  
 7 a risk in a heavily populated area and yet I am reading  
 8 a site-wide environmental study saying we are going to  
 9 double the amount of plutonium, so that is real  
 10 confusing. I would like to see the final EIR to tell  
 11 us actually what Department of Energy's intentions are  
 12 here because it is really confusing. I mean, I have  
 13 read three or four front page articles, Spencer Abraham  
 14 wants that stuff out of here but yet you are guys are  
 15 talking about doubling it. So that a problem I have  
 16 with it.

27/33.01

17 First, I want to say I support the activities  
 18 of the Lab that enhance the environment, energy related  
 19 research, environmental protection, these are the valid  
 20 missions of the Lab, not creations of new weapons of  
 21 mass destruction, nuclear or biological.

28/07.01

22 In the Cold War, the purpose of the Lab was to  
 23 provide deterrents, stockpile stewardship. Today the  
 24 world faces a new danger unrelated to the Cold War. We  
 25 are now dealing with an enemy that relishes death, that

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1 relished destruction. We are no longer deterring  
2 anything. In fact, we are providing weapons for our  
3 enemy to use against us in our own backyard. It is not  
4 a very sensible way to approach things.

5 That being said I want to talk for a minute  
6 about the impact of Site 300 and Lawrence Livermore Lab  
7 on the Tracy community. This is a map of the existing  
8 inhalation cancer risk in the City of Tracy. This is a  
9 secret that's been kept from everyone. Three to four  
10 times the state average for inhalation cancer risk  
11 exists in our town and that is something I would like  
12 to submit to you, that purple area.

13 Now, on top of that, the State in their  
14 infinite wisdom is putting three major power plants in  
15 our backyard, 1100 megawatt Tulsa Power Plant, 1169  
16 megawatt East Altamont Energy Center and 169 megawatt  
17 Tracy Peaker plant. The combined total of toxic air  
18 contaminants from these three facilities is 1,000 tons  
19 per year. That does not include the criteria of  
20 pollutants.

21 Now, to add to our little mix of chemicals  
22 here with our already elevated cancer risk we have a  
23 City and County that is approving many subdivisions  
24 that will bring business parks, homes and many, many  
25 automobiles with more toxic air contaminants. In fact,

29/23.02

1 the Mountain House Community is estimated to produce  
2 1471 tons per year of nitrous oxides. 1,008 tons of  
3 VOC's and 158 tons of PM10. We have three business  
4 parks, 25,000 new jobs each. We have the Tracy Hills  
5 Tech Park, 327 tons of nox per year, 168 tons of VOC's,  
6 all these projects also generate toxic air contaminants  
7 which are not contained in their environmental  
8 statements and they are not mitigated. They may say  
9 they mitigate the criteria air pollutants; the toxic  
10 air contaminants are not mitigated, so essentially what  
11 you have here is a stew.

12 Now what I would like to know is: Will the  
13 site-wide environmental impact study discuss the  
14 background cancer risk in the City of Tracy in  
15 combination with the three power plants and the  
16 numerous residential developments and business parks  
17 that are being put in the City of Tracy. That is my  
18 number one concern, the site-wide environmental study  
19 has to do a cumulative health risk assessment including  
20 the background and all the new projects that have been  
21 certified and are currently some under construction.

22 Now, the previously what we talked about, the  
23 cancer risk from people who are along the routes of the  
24 trucks that are carrying these new radioactive  
25 materials to our community, that was 6.5, I don't quite

29/23.02  
cont.

30/23.02

31/20.01

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1 understand how they came up with that number, but  
 2 that's beside the point. On top of that what's not  
 3 being discussed is that the increase in experiments at  
 4 Site 300 will increase the dosage from 1.8 person rem  
 5 per year to 9.8 persons rem per year for Site 300.  
 6 That is a substantial increase. I believe it is on the  
 7 magnitude of about 400 percent so I want the site-wide  
 8 environmental impact study to discuss that in relation  
 9 to the existing projects that I've already elaborated  
 10 on here.

11 And I want to talk about environment justice.  
 12 What environmental justice puts in a community that all  
 13 ready has an existing elevated cancer risk these types  
 14 of projects and continues to pile radiation on top of  
 15 that? What kind of government, what kind of State, who  
 16 does this? I just, I don't understand it. It doesn't  
 17 make sense. I would like to have that discussed. I  
 18 want to know how the environmental impact statement  
 19 will deal with the environmental justice to the  
 20 citizens of Tracy and Livermore.

21 I would like to know the exact number and  
 22 quantity of shipments of hazardous materials and  
 23 radioactive waste that will be transported through our  
 24 community and I would like to know what additional  
 25 security measures will be associated with transporting

31/20.01  
cont.

32/17.04

33/15.02

34/20.01

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1 that material through our community.

2 MR. BROWN: You are at about the four minute  
 3 mark.

4 MR. SARVEY: Thank you. I would also like to  
 5 know will your new bio facility be a hardened facility.  
 6 Can it withstand a commercial airliner collision or  
 7 shoulder fired rocket? How many new security officers  
 8 and what additional training and screening will be  
 9 provided for the new operations and I would like to  
 10 know: Are these security officers that presently work  
 11 there, are they working a lot of overtime? Are they  
 12 tired on their job or are they alert and ready to go?

13 And I also have some comments here from TRAQC,  
 14 Tracy Regional Alliance For Quality Community.

15 I want to just briefly give you the headlines  
 16 on them. Then I will discuss their written comments.  
 17 First is radioactive tritium should not be allowed in  
 18 shots, test explosions at Site 300 nor an environmental  
 19 testing of explosive assemblies that release  
 20 radioactive tritium into the environment. No increased  
 21 dose to workers or the community should be allowed.  
 22 Please provide agreements and arrangements with fire  
 23 protection, police, security and emergency service for  
 24 incidents that may occur at Site 300.

25 Do not increase dangerous projects in a

35/30.01

36/17.01

37/04.01

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1 seismically active area. Preserve the local  
2 environment and protect endangered species. Do not  
3 allow increases in waste generation that increase  
4 contamination in air water and soil at Site 300. All  
5 decontamination and decommission activities have not  
6 been thoroughly taken into consideration and should be.

37/04.01  
cont.

7 One more issue I want to talk about is the  
8 fact that every year we face a funding crisis at Site  
9 300 for cleanup and yet we are sitting here talking  
10 about spending billions of dollars to increase our  
11 activities at the Lab without spending one cent to  
12 clean up what has already been deposited there at Site  
13 300. This is gross ipaction here. We should be  
14 spending all the money we can and once we clean that up  
15 then we can talk about bringing in new shipments of  
16 nuclear material and new testing. Until that is done  
17 that should not be discussed. Thank you.

38/03.01

18 MR. BROWN: Jack Cameron. Is Jack here? Gail  
19 Rieger and Gail will be followed by Don Larkin.

20 MS. RIEGER: My name is Gail Rieger and I have  
21 lived in Tracy for the last eight years and I am just a  
22 mom with three kids, one is 9 who wanted to come today  
23 at first and she decided it would be too scary and I  
24 agree with her, I am glad she didn't come.

25 One is 14 and I have a 17-year-old autistic

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1 boy who I truly believe part of the causes of autism  
2 have to do with the environment and the toxins and the  
3 environment, we are not going to go there now, but I  
4 don't think all the additional things that are going to  
5 be happening at the Lab are going to help our autism  
6 rates at all.

39/23.02

7 There is not a lot that I can add in my talk  
8 here because the people that have talked before me, I  
9 am nodding in agreement with everything that they've  
10 said from the terrorist attack -- when I drive the  
11 freeway all the time, you know, I am looking at all the  
12 trucks that come by and I always think are any of them  
13 carrying any nuclear materials, the accidents that you  
14 see constantly. It is very scary. When I drive by the  
15 canal 1, you know, think how easy it would be to just  
16 drop a piece of plutonium or other chemicals into the  
17 water supply there and how it could kill so many  
18 people. When I drive by the Livermore Lab I also think  
19 how scary that is, that it is in the middle of these  
20 millions of people and maybe when the Lab was first  
21 built in the '50's there wasn't a lot of population  
22 around but now there is and I really don't think we  
23 need to be increasing the amount of plutonium and other  
24 things at the Lab right now. I think it is really  
25 important to do the kind of work I think that Bob

40/30.01

41/33.01

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1 Sarvey had said and others about environmental issues  
2 and I don't see why the Lab and the US couldn't be the  
3 leaders in research and alternative energies and  
4 spending the billions of dollars that they do on  
5 research and the nuclear issues, it just doesn't make  
6 sense. We need to be the leaders of research in  
7 alternative energies and not in nuclear bombs. So,  
8 thank you.

42/07.01

9 MR. BROWN: Thank you. Don Larkin and Travis  
10 Fretter is next.

11 MR. LARKIN: My name is Don Larkin. I think  
12 we should spend a few minutes talking about what the  
13 benefits are for all this proposed activity at the Lab.  
14 And we know from the Nuclear Posture Review that the  
15 benefit is a new generation or a new nuclear weapons,  
16 it has to be generation of new nuclear weapons  
17 including mini nukes which although they may be small,  
18 they may have a small explosive explosion compared to  
19 the weapons currently in our arsenal, they are still  
20 really huge, still extremely powerful and destructive.  
21 I have heard people say a couple things about this  
22 activity and what these weapons are. One is that we  
23 have to do it because if we don't do it, somebody else  
24 will, and that is patently false. The United States is  
25 the only country with the money and the inclination to

43/02.01

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1 do nuclear weapons research like this. We are the  
2 driving force. The other thing I hear people say that  
3 we will never use them, we will just threaten people  
4 with them. Despite the fact the goal is to make more  
5 new usable nuclear weapons. So I think we ought to  
6 consider whether or not we would actually use these  
7 weapons and it so happens that in Iraq and Afghanistan  
8 we have now sort of a laboratory, a demonstration of  
9 how the US uses high tech weapons and one question we  
10 could ask is: Is the fact that these weapons have a  
11 radiological fallout and debris prevent us from using,  
12 would that restrain us from using it and the answer has  
13 to be no based upon the evidence. We're using depleted  
14 uranium weapons in Iraq again despite the evidence from  
15 Kosovo and the first war about their hazardous effect.  
16 We have evidence from Rocky Flats and Hanford that  
17 there was very little concern about radiological  
18 effects of even doing the research so I don't think  
19 that is going to constrain the United States from using  
20 it.

43/02.01  
cont.

44/32.02

21 What about civilian casualties? Will that  
22 constrain people? After all, the military claims that  
23 the war in Iraq has the most -- has seen the most  
24 precise use of weapons in history and that civilian  
25 casualties are kept to a minimum but they don't even

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1 keep track of civilian casualties for a population of  
 2 people we say we are liberating, we are bringing  
 3 democracy to them. We don't even care who we are  
 4 killing. Estimates are that there are over hundred  
 5 thousand -- ten thousand dead now and possibly more.  
 6 We have no crash program to provide medical  
 7 care and the best treatment possible for those people.  
 8 We don't care. So I don't think that is going to  
 9 constrain us, to stop us from using these weapons. So,  
 10 in effect, I think we have to take them at their word.  
 11 They will use these weapons they are developing.  
 12 Today, again, we dropped 500 pound bombs on houses  
 13 where we saw we thought some bad guys were, bad guys in  
 14 quotes, not caring who else might be in those houses.  
 15 So I think a country that turns soccer fields into  
 16 grave yards is capable of using these weapons.  
 17 What is the result if we do use them? The  
 18 barrier between conventional nuclear forces will be  
 19 breached and this will breach it for all time and for  
 20 all other countries and all other actors. There will  
 21 be universal revulsion against the United States. We  
 22 will be seen as an outlaw nation. We will become more  
 23 isolated. There will be a dwindling middle ground and  
 24 that middle ground is what constrains people who are  
 25 more willing to act against us so there will be less

1 constraint on people who want to act against us. There  
 2 will be more incentive to use terror tactics against  
 3 us. There will be more incentive for other people,  
 4 nations to develop their own nuclear arsenals that is  
 5 to deter us. In other words, we become less secure and  
 6 the proliferation of nuclear weapons is increased. You  
 7 can't fight terror with war and new weapons, especially  
 8 weapons of terror like those developed at this lab.  
 9 You can't end proliferation by creating more weapons to  
 10 proliferate.  
 11 There is another way. In this world where  
 12 there is growing inequality and where there is close to  
 13 one billion people malnourished, I think the United  
 14 Nations estimated it was 140 million people on the  
 15 earth are malnourished. Two billion people live on  
 16 less than two dollars a day. If you took the six  
 17 billion they are spending on developing new nuclear  
 18 weapons, you could double the income of that two  
 19 billion people that live on two dollars a day and still  
 20 have billions left over for administrative expenses to  
 21 administer the program. You could do a lot of things  
 22 in the world to increase people's security, their  
 23 freedom with this sort of money and that would make us  
 24 safer and you wouldn't have to put the communities of  
 25 Tracy and Livermore and Stockton at risk with these

45/01.01

46/03.01

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1 ill-advised activities. Thank you.

2 MR. BROWN: Okay, Travis Fretter followed by  
3 Shelby Janes.

4 MR. FRETTER: My name is Travis Fretter. I am  
5 a native of Berkeley. I am opposed to Lawrence  
6 Livermore National Laboratory's participation in  
7 increased storage or development of weapon systems or  
8 even a return to older projects of that type. I would  
9 prefer that such changes, if mandated by the

47/02.01

10 government, be managed at more remote sites such as Los  
11 Alamos or Nevada. The Chronicle article strikes me as  
12 a little alarmist approach leaning heavily on the power  
13 of hindsight. It mentions the possibility of another  
14 entity taking over the management of the Lab and  
15 nobody's talked about that but I would like to just put  
16 in my two cents on that one. My father was a physicist  
17 at the University of California and he later became  
18 Vice President and worked with Dave Saxon who was also  
19 a physicist and President of the University. So during  
20 that time I asked him: Now, they are talking about  
21 somebody else managing Livermore and Los Alamos and  
22 what do you think about that?

48/08.01

23 And he said, this is ten years ago, something  
24 to the effect of: Well, you could have somebody in the  
25 equivalent of Bush's government managing it directly or

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1 maybe a private entity like Enron or Haliburton and I  
2 don't think they would do as good a job for the people  
3 as the University of California does which has a  
4 different set of criteria for their management  
5 approaches. So I have always thought in this question  
6 which nobody discussed about who is managing it, it is  
7 really important for the University which seems to be  
8 the most effective and stable management entity to  
9 continue that management should that question come up  
10 in the forthcoming discussions about increasing the  
11 activities at the Lab.

12 So finally, I just want to say I support the  
13 elimination of all nuclear arms world wide with the  
14 United States leading the way. Thank you. 49/01.03

15 MR. BROWN: Shelby Janes and Shirley Green  
16 will follow.

17 MR. JANES: I am Shelby Janes, former  
18 treasurer of our State capital's branch of Peace  
19 Action, formerly known as Sane Freeze. Remember Sane  
20 Freeze the -- it is insane not to freeze the  
21 uncontrolled use of radiation and bio chemicals.

22 I have also appeared at previous hearings. I  
23 got a hold of something and it frightened me just a bit  
24 and I brought some kind of visual aids with me but the  
25 important thing is it was talking about the Lab

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1 proposes genetic modification and aerosolization,  
 2 spraying with live anthrax, you know, these living  
 3 things, and plague, and other deadly pathogens. In  
 4 could weaken the International Biological Weapons  
 5 Treaty. Now that is important, isn't it?  
 6 And it poses a risk to workers, the public and  
 7 the environment here in the Bay Area.  
 8 Well, I don't have to bring out the aerosol  
 9 spray can to demonstrate that. Let me just relieve our  
 10 mind here for just a moment, might seem like comic  
 11 relief, but I really do seriously want to invite  
 12 everybody, especially the locals, but I am including  
 13 everybody, to the nearby Arby's. I think it would be  
 14 nice to have a talk fest and I'm treating. It is just  
 15 down the road by the A.M./P.M., if I may mention that.  
 16 It is apparently close to the McDonalds. It is next to  
 17 the Wendy's and the Arby's is the only place I know of  
 18 that has potato ckeses so all of you are welcome there  
 19 after this meeting. Especially you folks that talked  
 20 with terms like criticality issues, the alpha  
 21 particles, bringing up the fact that earthquakes could  
 22 happen here so close to the San Andreas fault and the  
 23 fellow that mentioned toxic air contaminants.  
 24 I see I haven't reached my four minutes yet,  
 25 so let me tell you something else that frightened me.

50/35.01

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1 Apparently the Lab intends to heat plutonium and this  
 2 is just a flashlight to demonstrate shooting multiple  
 3 laser beams through the vapor cloud. I find that  
 4 frightening and I am no where close to four minutes.  
 5 MR. BROWN: That potato pancakes gets you some  
 6 extra time.  
 7 MR. JANES: As you can tell, I didn't go to  
 8 business law like my friend advised. I have become a  
 9 performance composer and I certainly hope I don't have  
 10 to compose something that tries to bring this issue to  
 11 more public attention. I think we have more important  
 12 things to do than that.  
 13 So in conclusion I would just like to say to  
 14 the decision makers concerning these issues, thank you  
 15 for this chance for dialogue, we have all heard each  
 16 other talking. I want to congratulate you all on your  
 17 devotion to scientific matters. I, myself, received  
 18 third place in our Midwestern Science Fair, thank you  
 19 for your time.  
 20 MR. BROWN: Okay, Shirley Green.  
 21 MS. GREEN: Can you hear me? Okay, I am  
 22 starting an organization called military families  
 23 against corporate colonialism. I come from a military  
 24 family. My father a retired navy lieutenant commander,  
 25 father-in-law retired Army Colonel. My stepmother was

51/27.01

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1 a secretary to the -- the secretary of naval air  
 2 warfare in the Pentagon. My aunt was the Inspector  
 3 General for NASA. I currently have numerous young  
 4 nephews, nieces and sister-in-law in the military. My  
 5 sister-in-law was in Baghdad during the bombing. She  
 6 helped to set up communications. She was there in  
 7 August setting it up long before the war began. I have  
 8 a nephew there right now riding around in a depleted  
 9 uranium tank and he gets regular exposure. So we are  
 10 currently wondering how long it will be before he has  
 11 to go see a VA doctor for burning semen and perhaps his  
 12 wife will end up having uterine problems because of his  
 13 exposure to her and we wonder about the long-term  
 14 health of their newborn son.

15 Now, my written comments are: Former  
 16 employees of the Lab have told me personally that when  
 17 an employee begins to question the mission of the labs, 52/32.05  
 18 they are required to go into counseling. I find that  
 19 very interesting.

20 Number two, according to republican Senator  
 21 Chuck Hegel on NBC, the Today Show this week, he says:  
 22 This is a generational war expect it to last 25 years  
 23 and Senator Biden was also being interviewed regarding  
 24 this. They were talking about the draft.

25 Both of them feel it is necessary. We

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1 currently have 1.2 million people in the military.  
 2 135,000 in Iraq. Don't tell me we don't have an  
 3 empire.

4 This is a war based on false premises of  
 5 terrorism. The CIA, according to Chalmers Johnson calls  
 6 it blow back, a term that the CIA coined back in 1954  
 7 when covert actions were responded to with quote  
 8 terrorism against innocent Americans.

9 This is a war to secure America's dominance  
 10 over oil and gas reserves throughout the middle east as  
 11 well as the Caspian. In doing so they will control  
 12 two-thirds of the world's resources. It is a war to  
 13 eliminate competition and yes they are going to be a  
 14 lot of very angry people along the way that our  
 15 government currently and plans on to continue calling  
 16 terrorists. Our world wide oil reserves may have  
 17 already peaked, according to geologists in the  
 18 industry. We may have already reached the peak of  
 19 world wide output.

20 So this is a race to get the rest -- to get  
 21 control over these major oil deposits.

22 We need a nuclear war. We need dirty little,  
 23 small mini nukes. We need to make sure our competition  
 24 is eliminated. We need to make sure our competition  
 25 feels no desire to challenge us. All of our little

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1 attacks around the world, historically, have been to  
 2 keep our competition from thinking that they can take  
 3 us on.  
 4 We need to be spending the billions and  
 5 trillions of dollars being spent on this insanity to  
 6 create a world of cooperation and mutual respect with  
 7 technologies that are earth friendly. I find it highly  
 8 inappropriate that Tom Grim, an employee of Lawrence  
 9 Livermore Labs, is in charge of collecting public  
 10 comments.  
 11 Someone mentioned that we will never use  
 12 nuclear weapons. We are using them and we used them in  
 13 Gulf War I and we plan on continuing to use them --  
 14 quite a precedent. That is all I have to say.  
 15 MR. BROWN: That concludes a -- oh, fine.  
 16 MR. GRIM: Can you hear me? I just want to  
 17 say I am not an employee of the University of  
 18 California that operates the Lab. I am a federal  
 19 employee with the National Nuclear Security  
 20 Administration there at the Livermore site office. We  
 21 have about 100 federal employees with over sight  
 22 responsibilities for the Lab.  
 23 SPEAKER: I have a space outside of the Lab  
 24 where you can collect your information. Do you not  
 25 have to be on the same site as the Lab.

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1 MR. GRIM: Okay.  
 2 MR. BROWN: We have all those comments on the  
 3 record, then. That was the last person who had signed  
 4 up to speak. If anybody who hasn't spoken yet has  
 5 anything to add, raise your hand. You are certainly  
 6 free to come forward. Okay. Again, if you can provide  
 7 us your name and organization affiliation, if  
 8 appropriate.  
 9 MS. CONDI: My name is a Alexis Condi and I  
 10 just came here as an individual although I am  
 11 affiliated with some organizations.  
 12 But I come here as a survivor of one down-wind  
 13 episode already. Many don't realize that in 1951 above  
 14 ground nuclear testing began in the Nevada desert and  
 15 continued for 12 years. The doctors predict that  
 16 radiation exposure can cause birth defects and cancer.  
 17 My older sister born in 1951 in Utah had both. Back in  
 18 those days there were people like these giving all the  
 19 right answers. It sounds to me like we are having all  
 20 the right answers given to us again. The problem I  
 21 have, I have a couple of degrees and a couple of  
 22 teaching credentials from the University of California  
 23 at Davis and I have all kinds of loyalty to the  
 24 United States but I don't believe you. I find it  
 25 laughable that there could be a prediction that an

53/25.06

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1 accident at Livermore Lab involving plutonium could  
2 only happen one in a million years. How could we  
3 honestly say that we now know in 2004 what could happen  
4 and truly control for all the variables that could  
5 occur over a one million year period. I am also  
6 disappointed the Draft Site-wide Environmental Impact  
7 Statement for Continued Operation of Lawrence Livermore  
8 National Laboratory decided to neglect to include  
9 statistics on cancer and birth defects for children in  
10 California. I have read that both cancer and birth  
11 defects in California are on the rise in children and I  
12 am not comforted that Livermore statistics were not  
13 even included in the report.

53/25.06  
cont.

14 I really wish I didn't feel this way. I  
15 really wish I could believe these people. But after  
16 having watched the situation in Utah where for 30 or 40  
17 years the government systematically lied and denied  
18 people even access to medical care, they would, they  
19 would get calls, the doctors were trying to treat  
20 people would get calls from the nuclear agency saying  
21 that we are going to nail you to the wall if you tell  
22 these people what's wrong with them.

54/23.02

23 So I think there is a lot of people out there  
24 like me. I know that I drove here from Sacramento. I  
25 don't believe that a 50 mile radius around Livermore

55/25.06

1 Lab is sufficient to even begin to discuss an  
2 appropriate environmental impact statement and I know  
3 there is a lot of people out there like me. Now I  
4 happen to have been raised in a very Christian  
5 environment. There is a lot of people out there in the  
6 United States that simply just don't believe the  
7 government anymore. So I am not as much concerned  
8 sometimes about the terrorism outside as I am about  
9 things like happened in Oklahoma City. Thank you.

55/25.06  
cont.

10 MR. BROWN: Anyone else that hasn't spoken yet  
11 that would like to add any comments? Given the fact  
12 that no one else choosing to speak at this time, there  
13 wasn't an end time published for this meeting and I  
14 think what we often do in these circumstances is I  
15 think we will remain available for comments through  
16 9:30. So I think what we will do at this point is to  
17 recess. If any of you decide you would like to add  
18 something more, please see me. If somebody else  
19 happens to show up later and wants to make a comment,  
20 we will reconvene and do that. So we are currently in  
21 adjournment and I appreciate your attendance and your  
22 comments tonight.

23 MR. BROWN: It's 9:30, the time that we have  
24 announced that we would reconvene and if there were any  
25 other persons wanting to enter statements in the

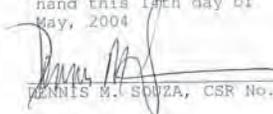
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1 record. Seeing that there is no member of the public  
 2 present at this point, we will officially adjourn the  
 3 meeting. Thank you very much.  
 4 (Whereupon the hearing was adjourned).  
 5  
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1 STATE OF CALIFORNIA )  
 2 COUNTY OF ALAMEDA )  
 3  
 4  
 5  
 6  
 7  
 8  
 9 I hereby certify that the public hearing  
 10 was taken at the time and place therein named; that the  
 11 comments of the said witness was reported by me, a duly  
 12 Certified Shorthand Reporter and disinterested person,  
 13 and was thereafter transcribed into typewriting under  
 14 my direction.  
 15  
 16  
 17 WITNESS WHEREOF, I have  
 18 hereunto subscribed my  
 19 hand this 19th day of  
 20 May, 2004  
 21   
 22 DENNIS M. SOUZA, CSR No. 3893  
 23  
 24  
 25

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UNITED STATES OF AMERICA

+ + + + +

DEPARTMENT OF ENERGY

+ + + + +

PUBLIC HEARING

ON THE SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT FOR  
 CONTINUED OPERATION OF LAWRENCE LIVERMORE NATIONAL  
 LABORATORY AND SUPPLEMENTAL STOCKPILE STEWARDSHIP  
 AND MANAGEMENT PROGRAMMATIC ENVIRONMENTAL IMPACT  
 STATEMENT

PUBLIC COMMENT

+ + + + +

Friday, April 30, 2004

+ + + + +

The public comment came to order at 11:00 a.m. in room 1E-245 of 1000 Independence Ave, NE Washington, DC. Holmes Brown, Facilitator, presiding.

PRESENT:

Holmes Brown      Facilitator  
 Tom Grim            SW/SPEIS Document Manager  
 Gordon Guenterberg    LLNL  
 Janet Neville        NEPA Compliance Officer

PUBLIC PRESENT:

Ilene LaLand        Rhythm Workers Union  
 Paul Leventhal      Nuclear Control Institute  
 Victoria Samson     Center for Defense Information  
 Arjun Makhijani     IEER  
 Loulena Miles       Tri-Valley CAREs  
 Christopher Paine   NRDC  
 Jim Bridgman        ANA  
 Dianne D'Arrigo    NIRS

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A-G-E-N-D-A

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1 P-R-O-C-E-E-D-I-N-G-S  
 2 10:55 a.m.  
 3 FACILITATOR BROWN: It's now time to  
 4 receive your comments for inclusion in the formal  
 5 record, and this record will be transcribed by a  
 6 court reporter.  
 7 I'll call on speakers in the order in  
 8 which they signed up. Please come up to this  
 9 podium and introduce yourself, providing an  
 10 organization affiliation if appropriate. If you  
 11 haven't signed in yet, just " I guess there's a  
 12 sign-up sheet over on the side and we can add your  
 13 name to the list.  
 14 If you have a written copy of your  
 15 statement, after you've completed your statement  
 16 you can give that to Tom, and he'll hand that on to  
 17 the court reporter to cross check with his own  
 18 record.  
 19 Also, if you have any appendices,  
 20 things that you are not actually wanting to read  
 21 but would like to have entered in the record for  
 22 consideration, Tom will accept those as well and  
 23 make those part of the record.  
 24 We have a smaller group signed up today  
 25 than we've had at our previous meetings, but to

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1 ensure that people meet their schedules and  
 2 everybody has an opportunity to speak I'll ask that  
 3 if you can confine your remarks to ten minutes,  
 4 that usually gives people enough time to get  
 5 everything said.  
 6 Also, I should remind you that comments  
 7 submitted, whether they are given on the public  
 8 record or submitted in writing, by e-mail, fax or  
 9 whatever, all receive equal consideration. The  
 10 Department receives them and considers them all  
 11 equally.  
 12 I'll give you notice at the nine minute  
 13 mark, just so you can conclude your remarks, and  
 14 also will call the next speaker at the same time,  
 15 just so you have an opportunity to be ready.  
 16 Tom Grim will be serving as the hearing  
 17 officer for the National Nuclear Security Agency  
 18 for this hearing.  
 19 So, with that, if I may call our first  
 20 signed-up speaker, who is Ilene LaLand.  
 21 Ms. LaLAND: Thank you. My name is  
 22 Ilene LaLand, and I'm a part-time resident in  
 23 Livermore, and what we've been dealing with over  
 24 the many years that I've been there has been lots  
 25 of pollution. Pollution, the grapes has been

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1 contaminated, the milk has been contaminated,  
2 honey has been contaminated. The soil has been  
3 contaminated, there's even been garden, you know,  
4 sludge that has been given to the community for  
5 their flower and vegetable production in their home  
6 communities that have been laden with different  
7 elements from the lab that they had no idea that  
8 they were receiving when they received it.

9 There's been enormous amounts of  
10 accidents, spills into the water. The lab has  
11 polluted two huge aquifers, and it did take a  
12 lawsuit, I believe, to get them to clean that.

13 There's, I believe, also a document  
14 that is significantly undercutting the clean-up  
15 plans at the lab right now, so this doesn't make me  
16 feel very comfortable about the protection and the  
17 way that they are working with the community.  
18 There's been accidents that have not even been told  
19 about to the community, the community hasn't been  
20 warned about them, so I'm concerned about the  
21 relationship that the lab actually has with the  
22 community.

23 I've been living in the Bay area for 20  
24 years or so on and off, and we've been dealing with  
25 what the lab has already left behind in the past

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1 and are still producing.

2 Their protection to the community, like  
3 I said, has been very bad. So, my first question  
4 is about the clean-up and reducing the clean-up,  
5 and I'm wondering if that's because with all this  
6 additional plutonium and tritium coming out there  
7 and bio warfare, anthrax, botulism, the Plague  
8 coming out there, that we can trust the lab to not  
9 only be respectful with it, but to " how would they  
10 protect the community in case of an accident, in  
11 case of " it's on a fault line, there is " it's on  
12 the airline flight pattern, so there's numerous  
13 ways that accidents can happen, including  
14 terrorism.

1/04.01

15 And, in the pictures that you showed of  
16 the lab and site 300, it didn't show the dense,  
17 dense population that starts from across the street  
18 from the lab and goes all the way to San Francisco,  
19 and it's growing all the time. The open space  
20 around the lab right now is being filled it seems,  
21 there's construction going on all around it. So,  
22 it's getting more densely populated all the time.

23 And so, I want to know what the " how  
24 you would protect the people in Livermore if there  
25 was a terrorist attack on the lab, if there was an

2/30.01

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1 accident in the way of an earthquake, if a plane  
2 falls on the lab, like these things do happen, if  
3 it falls into a bio lab or into a room that has  
4 three times the amount of plutonium that it's  
5 allowed to have, how would you even evacuate  
6 Livermore, never mind 7 million people in the Bay  
7 area. When people are so close as across the  
8 street, and there's hundreds and hundreds of people  
9 living in these apartment houses, women, children,  
10 homes, how can you possibly protect them in the  
11 situation that I propose?

3/25.05

12 And, I just want to make a comment that  
13 we don't want this kind of stuff in our future.  
14 How could we be so tantalized by the idea of  
15 killing millions of people in other countries, that  
16 we would risk killing so many people in our own  
17 country, and destroying the environment to the  
18 point where our children, our grandchildren, will  
19 have to deal with this for the rest of their lives,  
20 maybe risking the ability for them to have children  
21 and grandchildren.

1/04.01  
cont.

22 And, I want to make a comment that in  
23 my community I do not want " I don't want this  
24 built in my community, I don't want it going out  
25 into other communities and killing a lot of

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1 innocent people that don't deserve this anymore  
2 than we deserve it in Livermore.

1/04.01  
cont.

3 Thank you.  
4 FACILITATOR BROWN: Thank you very much.  
5 Paul Leventhal. And, Paul will be  
6 followed by Victoria Samson.

7 MR. LEVENTHAL: Good morning, and thank  
8 you for the opportunity to make a statement.

9 My statement will focus on achievement  
10 in Appendix N of the Plutonium AVLIS project that  
11 is proposed. The Nuclear Control Institute, of  
12 which I'm the Founding President, strongly opposes,  
13 particularly on non-proliferation grounds, the  
14 Department of Energy's plan to provide the long  
15 dormant plutonium AVLIS plans at Lawrence Livermore  
16 National Lab.

4/01.01

17 In 1990, the Reagan Administration  
18 decided to zero out funding for the construction of  
19 the predecessor Special Isotope Separation, the SIS  
20 plant, a facility capable of purifying plutonium  
21 obtained from nuclear power plants, including the N  
22 Reactor, into material ideally suited for nuclear  
23 weapons.

5/27.01

24 The decision to halt work on the SIS  
25 plant at DOE's Idaho Falls site at that time,

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1 represented a major victory for nuclear non-  
2 proliferation. A key factor in the decision to  
3 cancel the plan was a report on the Nuclear Weapons  
4 Production Complex, by the National Research  
5 Council, that stressed the considerable  
6 proliferation risks posed by the plutonium isotope  
7 separation technology.

8 The report warned that, "Technology for  
9 converting reactive grade to weapons-grade  
10 plutonium forms a potential bridge between the  
11 civilian fuel cycle and weapons production." And,  
12 the report concluded, "Any additional decision to  
13 proceed with the SIS facility should explicitly  
14 consider the implications of the technology for  
15 nuclear proliferation."

16 And, I will conclude my remarks by  
17 calling for a separate non-proliferation impact  
18 evaluation to be made an integral part of the draft  
19 EIS that can be considered under the terms of NEPA.

20 The National Research Council report in  
21 December, '89, mirrored the non-proliferation  
22 arguments made in a letter signed by 31 experts on  
23 nuclear weapons and nuclear non-proliferation that  
24 was released the previous May by the Nuclear  
25 Control Institute. A letter which was sent to the

5/27.01  
cont.

6/01.01

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1 committees of jurisdiction on Capitol Hill  
2 explained in detail the threat posed by the SIS  
3 technology, and to the vital separation of civilian  
4 and military uses of nuclear energy, and the  
5 dangerous precedent that the construction would set  
6 for non-nuclear weapon states.

7 Those arguments were influential in  
8 Congress' decision to delete most of the funding  
9 from the SIS project from the plutonium AVLIS  
10 project, and the Reagan Administration's eventual  
11 decision to kill it. And, those arguments, I  
12 contend, are equally applicable today and should be  
13 considered.

14 Proceeding with the plant, the signer  
15 of the letter warned, would do serious damage to  
16 the United States' longstanding national security  
17 objective of discouraging and inhibiting further  
18 nations or terrorists from acquiring nuclear  
19 weapons. And, among the signers of that letter were  
20 Gerard Smith, the former Chief SALT I negotiator  
21 and former Ambassador at Large for Nuclear Non-  
22 proliferation, Paul Warnke, the first U.S. Arms  
23 Control and Disarmament Agency Director, Peter  
24 Bradford, a former Commissioner of the Nuclear  
25 Regulatory Commission, Russell Peterson, former

6/01.01  
cont.

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1 Director of the Congressional Office of Technology  
2 Assessment, and Friedman Dyson of the Princeton  
3 Institute for Advanced Study, as well as several  
4 other academic and independent experts on nuclear  
5 weapons matters. And, I have recovered this letter  
6 from the archives of the Nuclear Control Institute,  
7 and I've attached it to my testimony, and I would  
8 like it to be considered part of the record.

9 The experts asserted that construction  
10 and operation of the SIS plant would threaten U.S.  
11 non-proliferation objectives without providing  
12 offsetting national security benefits, and they  
13 cited four concerns.

14 The first was the potential use,  
15 according to DOE's own witnesses at that time, for  
16 the use of the plant on plutonium recovered from  
17 commercial spent fuel. The second was completion  
18 of the SIS plant could lead to the spread of SIS-  
19 type laser technologies worldwide and pose  
20 unprecedented challenges containing nuclear  
21 programs of emerging and advanced industrial states  
22 to exclusively peaceful purposes. The third was  
23 that the operation of the SIS-type facilities in  
24 nuclear non-weapon states would present a  
25 formidable safeguards task for the International

6/01.01  
cont.

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1 Atomic Energy Agency, processing and storage of  
2 unprecedented quantities, large number of plutonium  
3 isotopes would require development of a new  
4 safeguards regime for which the IAEA, in the words  
5 of these experts, as "no previous experience and is  
6 ill-equipped," and that situation applies to this  
7 day. And last, the plutonium purification process  
8 carried out in an SIS plant could inadvertently  
9 completely thwart an important technical means to  
10 verify future arms reductions, thereby having an  
11 unintentional adverse effect on verification of  
12 arms control agreements between the United States  
13 and the then Soviet Union.

14 The experts concluded, "In view of the  
15 acknowledge surplus of plutonium in the U.S.  
16 nuclear arsenal, there are no clear national  
17 security benefits that offset the obvious nuclear  
18 proliferation and terrorism risks, as well as  
19 safeguards and verification problems opposed by the  
20 plant construction and use of the plant."

21 Now, it is by no means clear that there  
22 are national security benefits today that would  
23 justify DOE's planned revival of the plutonium  
24 laser isotope separation plant at this time at  
25 Livermore. The site-wide environmental impact

6/01.01  
cont.

7/27.01

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1 statement speaks only of a "need for augmentation  
2 of the current inventory of special nuclear  
3 material, example, plutonium-enriched uranium, to  
4 support the Stockpile Stewardship Certification  
5 activities." The type of plutonium needed is not  
6 specified, but it is widely assumed that plutonium  
7 242 is needed for hydrodynamic testing of a mock-up  
8 nuclear weapon during which high explosives are  
9 detonated and the resulting motions and reactions  
10 of materials and components are measured.

11 But, there is no analysis of why this  
12 isotope of plutonium could not be produced by  
13 simply irradiating target material in an operating  
14 reactor within the DOE complex, as had been done in  
15 the production reactors at the Savannah River site  
16 when they were operating.

17 Equally troubling is the absence of any  
18 discussion in the EIS of what mission the plutonium  
19 isotope separation plant, presumably with a 30-year  
20 design life, would be given after any campaign to  
21 separate plutonium 242 is completed.

22 The predecessor SIS plant was supposed  
23 to process eight to nine metric tons of DOE fuel-  
24 grade plutonium into weapons-grade plutonium over a  
25 period of less than ten years, and it had not been

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7/27.01  
cont.

1 assigned an additional role after that work was  
2 completed. This was a matter of considerable  
3 concern at the time, because DOES Acting Assistant  
4 Administrator for Defense had testified before the  
5 House Armed Services Committee that commercial  
6 spent fuel, "is a potential" plutonium source for  
7 the SIS facility, although not part of present  
8 planning for the facility because a "major change  
9 in law" would be required.

10 The law he was referring to was the  
11 Hart Simpson Mitchell Amendment to the Atomic  
12 Energy Act, an act of 1982, prohibiting military  
13 use of commercial plutonium or enriched uranium.  
14 It was enacted directly in response to DOE's  
15 original mission for the SIS plant, that is, for  
16 the plutonium AVLIS technology, to produce weapons-  
17 grade plutonium from plutonium in commercial spent  
18 fuel, a practice that would have violated a basic  
19 tenet of U.S. non-proliferation policy, separation  
20 of civilian from military applications of nuclear  
21 energy, and only a congressional declaration of  
22 national emergency could have overridden that  
23 statute.

24 Given this troubling history, it is  
25 important to get assurances of what the plutonium

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7/27.01  
cont.

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1 isotope separation plant will not be used for, as  
2 it is to get details of what the plant would be  
3 used for.

4 Unless potential use of the plant as a  
5 bridge between military and civilian applications  
6 of nuclear energy is specifically ruled out, there  
7 is a strong likelihood that DOE will find a way to  
8 bridge the gap.

9 Now, the Bush-Cheney Energy Plan,  
10 released in May of 2000, makes clear that this  
11 Administration is favorably disposed toward the  
12 reprocessing of commercial nuclear power plant  
13 spent fuel. The energy plan cites the reprocessing  
14 experience of Britain, France and Japan, as an  
15 example for the United States to follow. There are  
16 high costs, severe security risks, unresolved waste  
17 disposal problems, and mounting stockpiles of  
18 unwanted plutonium associated with these programs,  
19 yet the nuclear industry and its allies on Capitol  
20 Hill have been pushing the Bush Administration to  
21 reverse the decisions against reprocessing made in  
22 the Ford, Carter and Reagan Administrations, and to  
23 follow the Europeans and the Japanese instead.

24 Now, a major defect of the draft Site-  
25 Wide Livermore EIS is that there is no non-

7/27.01  
cont.

6/01.01  
cont.

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1 proliferation analysis of the impact of the  
2 plutonium AVLIS program. NCI's position is that  
3 proliferation implications of the AVLIS plant must  
4 be included in the EIS, in the Site-Wide EIS, and  
5 thoroughly analyzed before any decision on  
6 proceeding with the plant is made. A non-  
7 proliferation impact analysis should be prepared  
8 and made an integral part of the EIS and subject to  
9 review under the terms of NEPA.

10 FACILITATOR BROWN: You're at nine  
11 minutes.

12 MR. LEVENTHAL: Okay, I just have about  
13 a minute more.

14 The review should include a thorough  
15 analysis of the impacts of the laser separation  
16 technology, which if developed and applied at  
17 Livermore could be disseminated or otherwise  
18 stimulate development of such plants in non-nuclear  
19 weapon states under civilian auspices for  
20 production of weapons-grade plutonium.

21 An example of such a transfer by DOE of  
22 military nuclear technology was the transfer to  
23 Japan in the 1980s by Oak Ridge National Laboratory  
24 of breeder-blanket reprocessing technology for  
25 separation of weapons-grade plutonium. The Oak

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cont.

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1 Ridge blueprints were used for the design of  
 2 Japan's RETF facility. This was deemed by DOE not  
 3 to be a transfer of sensitive nuclear technology  
 4 prohibited from export to a non-nuclear weapon  
 5 state on the grounds that Japan already had a  
 6 civilian reprocessing program, albeit one applied  
 7 to spent fuel, not breeder-blanket material. The  
 8 same logic that applied to future transfer of  
 9 plutonium AVLIS technology to Japan on grounds that  
 10 Japan already has a laser program, albeit profusion  
 11 development, not plutonium confinement purposes.

12 The proliferation significance of the  
 13 AVLIS technology has been made all the more  
 14 apparent by Iran's admission last fall to the IAEA  
 15 that it has been secretly pursuing a laser-based  
 16 uranium enrichment program since '91. Previously,  
 17 Iran had acknowledged only a research and  
 18 development program involving lasers, not an  
 19 enrichment program. Given the urgency of the  
 20 United States' efforts to win wide international  
 21 support for shutting down Iran's nuclear weapons  
 22 program, this is surely precisely the wrong time to  
 23 start up a nuclear weapons AVLIS program at  
 24 Livermore.

25 In conclusion, I close with this

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1 statement, DOE would be well-advised to apply to  
 2 the plutonium AVLIS facility the advice offered by  
 3 the U.S. National Research Council in 1989, with  
 4 regard to the SIS plant, and I quote, "Any decision  
 5 to proceed should explicitly consider the  
 6 implications of the technology for nuclear  
 7 proliferation."

8 Thank you.  
 9 FACILITATOR BROWN: Thank you.  
 10 MR. LEVENTHAL: And, I'll submit my  
 11 statement to the record.

12 FACILITATOR BROWN: Thank you.  
 13 Our next speaker is Victoria Samson and  
 14 Arjun Makhijani will follow.

15 MS. SAMSON: Hi, I'm Victoria Samson,  
 16 with the Center for Defense Information in  
 17 Washington, D.C.

18 The recent released draft Site-Wide  
 19 Environmental Impact Statement for the Lawrence  
 20 Livermore National Lab tips the Department of  
 21 Energy's hand toward this plan to not only maintain  
 22 the U.S. Nuclear Arsenal, but to expand it.

23 The plan divulges that Lawrence  
 24 Livermore is likely to develop diagnostics to  
 25 enhance the United States nuclear test readiness

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1 level. This comes on the heels of repeated efforts  
2 by this Administration to do the same.

3 Last year, \$24.89 million was requested  
4 so that DOE could decrease the amount of time  
5 needed to prepare and hold a nuclear test.  
6 Congress, after much debate, approved the amount  
7 and instructed DOE to keep the nuclear test  
8 readiness at its current level, 24 to 36 months.

9 But, in this year's budget request the  
10 Administration decided to ignore earlier  
11 congressional restrictions. Again, funding was  
12 requested for enhanced test readiness, this time  
13 \$30 million is to create 18<sup>th</sup> month readiness level.

14 This 21.4 percent increase over last year comes  
15 after repeated testimony by DOE officials to the  
16 safety and reliability of the U.S. Nuclear Arsenal.

17 The only possible need for new nuclear  
18 testing at this time would be to try out a new  
19 weapon design. In fact, funding has been requested  
20 for just that. The robust nuclear earth  
21 penetrator, or RNF, is portrayed by supporters as a  
22 weapon that could be used against hardened and  
23 deeply buried targets. \$15 million was requested in  
24 FY 04, Congress approved \$7.5 million for the  
25 project, and specified that none of the money could

8/39.01

9/02.01

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1 be used for engineering development.

2 This year, \$27.6 million was requested  
3 for the RNF, an increase of 270 percent. Even more  
4 ambitious is the DOE's five-year plan, in which it  
5 estimates that \$484.7 million will be spent on the  
6 RNF. DOE officials claim that this estimate is  
7 simply a placeholder for R&D work, but half a  
8 billion dollars pushes the RNF well past mere  
9 research project status.

10 The B-83, which has been worked on at  
11 Lawrence Livermore, is often brooded as a possible  
12 candidate for the RNF. Lab officials frequently  
13 promote their institutions as a home for the next  
14 generation of technology, pointing to their work on  
15 Stockpile Stewardship as a beneficiary of that  
16 relationship.

17 However, DOE is doing more than that.  
18 It is moving toward an enhanced nuclear test  
19 readiness posture, and aggressively spending on a  
20 new weapon design whose engineers are likely to  
21 push for testing. This spending will negatively  
22 affect international non-proliferation regimes.  
23 The RNF and enhanced nuclear test readiness levels  
24 show that the United States regards its nuclear  
25 arsenal as insufficient for international security

9/02.01  
cont.

10/39.01,  
02.01,  
01.01

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1 needs.

2 If we continue to improve our nuclear  
3 arsenal, how can we realistically expect to stop  
4 other countries from following our lead?

5 Thank you.

6 FACILITATOR BROWN: Okay, Arjun, to be  
7 followed by Loulena Miles.

8 MR. MAKHIJANI: Thanks, I'm Arjun  
9 Makhijani. I'm from the Institute for Energy and  
10 Environmental Research in Takoma Park, Maryland.

11 I'm restricting my comments at this  
12 time to the plutonium processing, and I'm going  
13 submit written comments later on.

14 I think I am not convinced by the  
15 accident analysis in the PEIS, in the draft PEIS, I  
16 think, particularly, the accident probabilities  
17 that are being theoretically calculated are far too  
18 low. I've looked at all three analyses of the  
19 Department of Energy in other contexts, like the  
20 tank farm at Savannah River site, and found the  
21 details of the statistical models that are used,  
22 failure probabilities are inadequate taking into  
23 account of actual accidents and grouping them  
24 properly. So, I think typically, so far as my  
25 experience goes, these accident probabilities are

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02.01,  
01.01  
cont.

11/25.06

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1 seriously underestimated often. And, in order for  
2 an environmental impact statement to be properly  
3 evaluated by the public I do think that the raw  
4 data on the accidents, and how they have been  
5 grouped, and how the specific industrial experience  
6 of Rocky Flats has been taken into account needs to  
7 be published. A draft should be republished with  
8 this data, because it's not possible for us to  
9 independently evaluate how these accident  
10 probabilities have been developed.

11 And, I think in this case it's  
12 especially important as you are planning, in my  
13 opinion, to create at least a semi-industrial scale  
14 plutonium processing facility in a place where  
15 you've got people living, essentially, across the  
16 street from the site, and the site is not very  
17 large. This is not a Hanford or Savannah River  
18 site with hundreds of square miles that we are  
19 talking about, it's just a little over one square  
20 mile.

21 So, I think the public does need to be  
22 afforded the chance to look at the raw data,  
23 because not only in DOE, but in NASA and other  
24 contexts, officials that are promoting programs are  
25 typically quite optimistic about the rate of

11/25.06  
cont.

12/27.01

11/25.06  
cont.

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1 failure, and then when failure happens and it's  
2 catastrophic then it's really too late to fix the  
3 problem, especially when it comes to plutonium  
4 contamination.

11/25.06  
cont.

5 My other comment at this stage relates  
6 to the waste stream. The Appendix N indicates that  
7 up to 10 kilograms of plutonium americium metal  
8 will be in the waste every year, maximum if you  
9 process 100 kilograms of plutonium. This is  
10 proposed to be sent either to Los Alamos for  
11 plutonium recovery or to WIPP. Now, the original  
12 1995 WIPP certification and the baseline inventory  
13 report of 1995 does not include the disposal of  
14 Transuranic metal in WIPP.

13/27.03

15 It's been the position of the State of  
16 New Mexico that they are not going to allow you,  
17 allow the Department of Energy, to dispose of any  
18 Transuranic wastes that are not in that 1995 list.

19 And so, I think it's completely inappropriate for  
20 the Department to have included this as a  
21 possibility in the draft EIS without any indication  
22 that it has arrived at some kind of agreement from  
23 the state and Environment Department of the State  
24 of New Mexico that this is going to be allowed.

25 The other kind of escape hatch that I

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1 see is that you are going to send the waste to Los  
2 Alamos for plutonium recovery, but then you are  
3 going to wind up in the same problem, in that you  
4 will have plutonium americium waste, albeit of a  
5 smaller quantity, presumably in metal form, that  
6 will not be allowed to be disposed of in WIPP. And,  
7 I don't think that there is any analysis in this  
8 draft EIS of what's going to eventually happen with  
9 this waste and where it might be disposed of.

10 And, the other issue that I would like  
11 to take in the same vein is that Appendix N assumes  
12 that you are going to receive completely pure  
13 plutonium metal from Hanford, without any americium  
14 content. I'm quite mystified by this, because  
15 Hanford doesn't have any processing capability.  
16 The fuel-grade plutonium has been sitting around  
17 there for quite a while. There's going to be quite  
18 a lot of americium growth in it, so I cannot see  
19 how Livermore expects to receive clean material. I  
20 think this is a technically unsupportable  
21 assumption, and if there is support it would be  
22 good that it was explicit as to where and how this  
23 plutonium would be processed just prior to shipment  
24 to Livermore so that it doesn't contain americium,  
25 and what's going to happen to that americium and

13/27.03  
cont.

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1 | how it's going to wind up in WIPP. | 13/27.03  
2 | Thanks. | cont.

3 | FACILITATOR BROWN: Okay, Loulena Miles  
4 | and Christopher Paine will follow.

5 | MS. MILES: Hi, my name is Loulena  
6 | Miles, and I'm the Staff Attorney with Tri-Valley  
7 | CAREs, and I've come out from Livermore, California  
8 | today.

9 | Tri-Valley CAREs has come to all of the  
10 | hearings, and we are here to talk about the fact  
11 | that we believe the lab is moving in the wrong  
12 | direction. We believe it's an inappropriate use of | 14/02.01  
13 | taxpayer dollars in a post-Cold War Era to be  
14 | recommitting the lab to an almost exclusive nuclear  
15 | weapons mission for the indefinite future.

16 | We also feel that it's irresponsible  
17 | for such a community of premier scientific minds to | 15/14.01  
18 | conceive of conducting high-risk projects in the  
19 | midst of a seismically active and densely populated  
20 | suburb community as the San Francisco Bay area.

21 | We will be objecting to a number of  
22 | projects in written comments, but today I just want  
23 | to focus on the plutonium limit, the plutonium in  
24 | the national ignition facility, and some recent  
25 | information, letters that came from the Defense

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1 | Nuclear Facility Safety Board.  
2 | Basically, the Site-Wide Environmental  
3 | Impact Statement outlines the plans to more than  
4 | double the amount of plutonium to over 3,000 pounds  
5 | on a site that's only 1.3 square miles. No more  
6 | than a few pounds can be stored safely in one place  
7 | at one time, to avoid criticality. The lab has  
8 | been cited on numerous times before for criticality  
9 | violations.

10 | As you know, plutonium is also | 16/33.01  
11 | pyrophoric and it can spontaneously ignite in  
12 | certain forms and under certain conditions. We are  
13 | very concerned about the safe storage of plutonium,  
14 | and we think that it should not " the level of  
15 | plutonium should not increase, in fact, it should  
16 | decrease as was stated in the 1992 Site-Wide  
17 | Environmental Impact Statement.

18 | So, recently on April 12, 2004, the  
19 | Defense Nuclear Facility Safety Board drafted a  
20 | letter to Lenton Brooks, the NMSA Administrator,  
21 | outlining some very serious concerns that they had  
22 | with the way that the Livermore Lab has been  
23 | downgrading their filtration system around the  
24 | plutonium " let me just quote it, "Of particular  
25 | concern to the Board is the new approach adopted by

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1 the Lab to allow unfiltered release of radioactive  
2 material from the facility during accident  
3 scenarios." They talk about the ventilation  
4 system, portions of the ventilation system have  
5 been downgraded from their high reliability, and  
6 the letter calls for a response within 30 days to  
7 these allegations.

8 And, I want to just give you a little  
9 bit more specific information, and I want this to  
10 be a part of the record, and I want to evaluate it  
11 in the final document.

12 Many components of the safety class  
13 system in Building 332, the plutonium facility,  
14 have been downgraded, including the emergency power  
15 system, portions of the glove box ventilation  
16 system, portions of the room ventilation system,  
17 and the fire detection and suppression systems.

18 They say, "Livermore is pursuing a new  
19 approach to accident analysis in that potentially  
20 harmful consequences to the public are mitigated by  
21 the structural boundaries of Building 332, rather  
22 than the ventilation system. In the past, Building  
23 332 relied on a safety class active ventilation  
24 system. To ensure radioactive materials released  
25 during an accident, such as fire, would be forced

17/25.07

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1 through a series of HEPA filters before being  
2 released to the outside environment. Under this  
3 new approach, it is assumed that the building's  
4 leak paths would physically reduce the release of  
5 unfiltered contaminants."

6 The reason the Lab is reducing the  
7 safety in the plutonium facility is because they  
8 have used some computer modeling, and the DNFSB has  
9 pointed out some of the errors in their computer  
10 modeling, including the fact that the model fails  
11 to account for the additional leak paths that would  
12 result from the use of emergency exit doors by  
13 personnel as they evacuate the building during a  
14 fire. And, they go on to say, in case you didn't  
15 know, evacuation is essential for worker  
16 protection, as described in the facility specific  
17 fire hazard analysis.

18 Another thing about their calculations  
19 is that they base the scenario on the fire lasting  
20 for only 30 minutes. In reality, the Board goes on  
21 to say that, "Such an event could continue for days  
22 until any airborne radioactive material released by  
23 the fire into the internal facility atmosphere had  
24 been removed by settlement, or released to the  
25 outside environment, or moved through remedial

17/25.07  
cont.

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1 actions." And so, basically, they are saying that  
2 releases will continue to occur for much longer  
3 than 30 minutes, and could go on for days, and that  
4 the model does not look at the amount that would be  
5 coming from that.

17/25.07  
cont.

6 And, another thing they talk about is  
7 that there's a sensitivity in the calibrations that  
8 needs to be done and the Livermore Lab did not do  
9 that in conducting the computer modeling for the  
10 input parameters.

11 So, that was one example of Livermore  
12 Lab downgrading their security systems around  
13 plutonium, the very material that the Lab was  
14 proposing to increase so significantly, over 100  
15 percent, to over 3,000 pounds, a very difficult  
16 material to store safely.

17 Another news event that's recently  
18 occurred is that the General Accounting Office has  
19 called for the Livermore Lab to " or is saying that  
20 the Livermore Lab should probably be reducing the  
21 plutonium on site because of safety considerations.

22 In light of the DNFSB and the GAO  
23 information that's coming out, we urge that the  
24 determination to increase plutonium does not go  
25 forward, and that actually the plutonium on site is

16/33.01  
cont.

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1 decreased.

16/33.01  
cont.

2 And additionally, I just wanted to say  
3 a few words about the plutonium in the national  
4 ignition facilities. Basically, the Site-Wide  
5 Environmental Impact Statement does propose to  
6 include plutonium in the national emission  
7 facility. This is something that was in the  
8 initial reports around the national emission  
9 facility, however, the Lab did a non-proliferation  
10 review in 1995 that stated that fissile materials  
11 would not be included in the national emission  
12 facility at that time, and that part of the reason  
13 that the national ignition facility was not a great  
14 proliferation risk is because there will not " it  
15 is limited in the amount of weapons development  
16 information that it can provide.

18/01.01

17 And now, with the proposed new  
18 materials, that does increase significantly the  
19 usefulness of the national ignition facility for  
20 weapons development. As Ray Kidder said at the  
21 Livermore Lab hearings, who is a former scientist  
22 of Livermore Lab, and who founded the " one of the  
23 founders of the laser programs at the Lab, he said  
24 that this could even increase the usefulness of NEF  
25 for new weapons production, including weapons that

14/02.01  
cont.

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1 are not currently in the arsenal at all. And, this 14/02.01  
 2 is a significant concern for Tri-Valley CAREs. We cont.  
 3 are calling for a proliferation analysis as part of  
 4 the NEPA review.

5 And, we would like the draft 18/01.01  
 6 Environmental Impact Statement to be recirculated, cont.  
 7 so that the community could have an opportunity to  
 8 comment on the proliferation analysis and the  
 9 adequacy of that.

10 So, I would just like to close in  
 11 saying that we feel it's reprehensible for the  
 12 Department of Energy to be moving forward with  
 13 plans to increase plutonium and such high-risk  
 14 experiments at the Lab, also increase the bio- 19/04.01  
 15 warfare agent programs at the Lab, at a time when  
 16 the security is being severely questioned by many  
 17 oversight entities, and the population increase is  
 18 so significant in the San Francisco Bay area.

19 Thank you.

20 FACILITATOR BROWN: Christopher Paine,  
 21 followed by Jim Bridgman.

22 MR. PAINE: My name is Christopher  
 23 Paine, and I'm a Senior Analyst with the Nuclear  
 24 Program of the National Resources Defense Council.

25 I'm going to go back to 1989, the year

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1 the Berlin Wall came down. At that time, DOE's  
 2 budget for nuclear weapons activities was \$4.25  
 3 billion, that's about \$5.5 billion in today's  
 4 dollars, and Lawrence Livermore's piece of that  
 5 budget was \$577 million, or about 13.5 percent.

6 Employment at LLNL stood at 8,200 full-  
 7 time equivalents at that time, half of whom were  
 8 supported by the DOE Nuclear Weapons Research  
 9 Development and Testing Program.

10 Today, 15 years later, the Berlin Wall  
 11 has disappeared. So has the Evil Empire, and the  
 12 Soviet Communism that built it, but the DOE budget  
 13 requests for nuclear weapons activities now stands  
 14 at \$6.81 billion, far above the Cold War average  
 15 support level of \$4.2 billion in current dollars.  
 16 Lawrence Livermore's piece is a little under a  
 17 billion, or 14 percent above where it was when the  
 18 Wall came down.

19 Livermore's employment stands at 10,600  
 20 personnel, 30 percent above the 1989 level. The  
 21 plutonium AVLIS project has been secretly, and in  
 22 our view illegally, revived. This, frankly, is a 20/27.01  
 23 ludicrous situation, and it should have been  
 24 avoided.

25 In 1995, the Department's own Secretary

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1 of Energy Advisory Board Task Force on Alternative  
2 Futures for the Nuclear Weapons Laboratories, the  
3 so-called John Galvin Commission, named after the  
4 retired Chairman of Motorola, that August body  
5 recommended a restructuring of weapon design  
6 capabilities among the three nuclear weapons design  
7 laboratories, and noted that, "The restructuring  
8 would affect, primarily, weapons design  
9 capabilities where the largest functional  
10 redundancy exists, specifically, Lawrence Livermore  
11 National Laboratory."

12 The Galvin Commission recommended, "In  
13 light of the revised U.S. nuclear weapons  
14 requirements, including a planned reduction to  
15 around 5,000 weapons by 2003," they recommended  
16 that Livermore should transfer, as cost efficiency  
17 allows, its activities in nuclear materials  
18 development and production to the other design  
19 laboratories. The proposed restructuring would  
20 also have included all of Livermore's direct  
21 stockpile support activity to other " transferred  
22 to other weapons laboratories.

23 The Clinton Administration, to its  
24 lasting discredit, did not act on this  
25 recommendation when the political door to

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21/08.01

1 significant de-nuclearization was still open. The  
2 result has been a steady restoration and expansion  
3 of redundant nuclear weapons capabilities at  
4 Livermore, duplicating similar capabilities at Los  
5 Alamos, Sandia and the Nevada Test Site, in some  
6 cases resulting in weapons research and development  
7 capabilities in triplicate.

8 This document which is before us today,  
9 in this document NNSA proposes to modernize and  
10 significantly expand LLNL's plutonium processing  
11 inventories and pit fabrication operations,  
12 upgrading and expand tritium operations, and build  
13 brand new centers for high explosive development  
14 energetic materials processing at Site 300. All  
15 these capabilities already exist in some form in  
16 one or more DOE sites. Moreover, the Livermore  
17 site, penned in by suburbs as other commenters have  
18 noted, with hazardous activities densely packed  
19 within a one and a third square mile area, is  
20 highly vulnerable to external attack, and it's  
21 hardly the most appropriate place, and I would  
22 accentuate, the most reasonable place, for these  
23 activities to be conducted.

24 I mean, please recall that reasonable  
25 is an important criteria under NEPA.

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22/04.01

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1 Another example of redundancy, in an  
 2 age when the network is the computer, perhaps, the  
 3 most egregious example of excess is the recent  
 4 construction by NMSA at all three nuclear weapons  
 5 laboratories of new supercomputing centers at an  
 6 average cost of \$2.9 billion per laboratory to fit  
 7 each with state-of-the-art weapon simulation  
 8 capabilities. I question, hasn't anyone at NSA  
 9 heard of secure networking? One wonders.

10 By pointing out the extravagant  
 11 redundancies that exist within the complex today, I  
 12 do not mean to project that Livermore should bear  
 13 the full brunt of any necessary consolidation, but  
 14 only that some form of consolidation and 23/08.01  
 15 rationalization of the complex is reasonably  
 16 indicated. For example, Livermore has long  
 17 demonstrated, and continues to demonstrate today, a  
 18 comparative advantage over Los Alamos in weapons  
 19 computing and software development. In a  
 20 rationalized and restructured complex that should  
 21 have been analyzed as a reasonable alternative for  
 22 Livermore under this EIS, Livermore could be made  
 23 the lead laboratory for weapons computing, and  
 24 retain sufficient competence and technology base to  
 25 continue its activities in non-proliferation,

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1 nuclear materials protection, homeland security,  
 2 intelligence support and verification, while  
 3 phasing out or transferring to other sites its  
 4 weapons plutonium, uranium, tritium, high  
 5 explosives, radiographic hydro tests and warhead  
 6 stockpile support functions.

7 This alternative, which was outlined by 23/08.01  
 8 the Galvin Commission in the mid '90s, and which cont.  
 9 is, in effect, being secretly considered today by  
 10 senior DOE officials, was not examined as a  
 11 reasonable alternative in the EIS, and that is, I  
 12 would remind everyone, legally unacceptable.

13 In light of the historical background  
 14 just noted, it's clear that some fundamental  
 15 premises of the current document are simply  
 16 invalid. For example, the document states and  
 17 stipulates, without any support, that achieving the  
 18 goals of the stewardship program requires the 24/02.01  
 19 continued operation of Lawrence Livermore National  
 20 Laboratory. That simply is not true, and is easily  
 21 demonstrated.

22 Even if Livermore disappeared tomorrow  
 23 in an earthquake, the United States would be left  
 24 with a very robust nuclear deterrent, and with full  
 25 capabilities for maintaining the stockpile.

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1 Livermore is responsible now for only about 20  
 2 percent of the total U.S. war reserve stockpile, 24/02.01  
 3 and by 2009 Livermore's fraction will be reduced to cont.  
 4 around 15 percent.

5 There are only four designs still in  
 6 the stockpile that Livermore is connected with, the  
 7 W-62 and the W-87, intercontinental ballistic  
 8 missile warheads, the W-84 cruise missile warhead,  
 9 and the B-83 bomb. The W-94 warheads are ground  
 10 launch cruise missile warheads whose delivery  
 11 systems were eliminated 15 years ago. They are not  
 12 maintained as part of the active nuclear weapons 25/01.03,  
 13 stockpile. 02.01,  
 14 08.01

15 Implementing the Moscow Treaty, W-62,  
 16 in May of 2002, will result in the retirement of  
 17 all 600 remaining Livermore designed W-62 ordnates  
 18 by 2009. And, within the ten-year period covered  
 19 by this document, Livermore will have only two  
 20 warhead types, the W-87 and the B-83, remaining in  
 21 its stockpile.

22 But, for the next five years the  
 23 renovation of the B-83 is not scheduled, so this is  
 24 a five-year window here at least, in which NSA  
 25 could easily restructure weapons support activities  
 within the complex, close out those functions,

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1 including fissile material operations at Livermore,  
 2 with no, I repeat, no disruption of the current  
 3 report activities for the nuclear stockpile.

4 Now, DOE, recognizing that Lawrence  
 5 Livermore weaponeers don't have a lot to do, 25/01.03,  
 6 "redistributed the workload" and moved a Los Alamos 02.01,  
 7 design, the air launch cruise missile, the W-80, 08.01  
 8 moved that design back to Livermore, so that cont.  
 9 Livermore would have something to do. And so,  
 10 there's the question that DOE would have to face of  
 11 taking those activities and moving them back to Los  
 12 Alamos where they should never have left.

13 There has to be a better way to deal  
 14 with a nuclear deterrent than returning to the  
 15 spending levels and programs of the Cold War, but  
 16 you won't find that reasonable alternative anywhere  
 17 in this draft EIS.

18 And, just to demonstrate how artificial  
 19 and artificially constrained the reasonable 26/31.01,  
 20 alternatives are in this EIS, just look at " I did, 08.01,  
 21 I compiled a list of the environmental metrics and 02.01  
 22 how much they vary between the various alternatives  
 23 from the environmental baseline in 2002, and they  
 24 vary typically by -5, +5, -10 to +10 percent among  
 25 all the alternatives. I mean, if there's no more

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1 | dramatic demonstration then these alternatives are  
2 | not really alternatives, they result in almost no  
3 | environmental significant difference in the last  
4 | impacts.

26/31.01,  
08.01,  
02.01  
cont.

5 | FACILITATOR BROWN: You are at the nine-  
6 | minute mark.

7 | MR. PAINE: Thank you.

8 | And finally, another obvious defect of  
9 | the document is it contains no consideration of  
10 | reasonably foreseeable impacts on nuclear weapons  
11 | proliferation, both vertical and horizontal, from,  
12 | as noted by an earlier commenter, from restarting  
13 | the laser isotope separation facilities, but also  
14 | from developing detailed physics models and  
15 | computer algorithms for simulating each stage in  
16 | the nuclear explosion sequence, and some of the  
17 | physics models that are being developed are being  
18 | developed in the unclassified literature. Detailed  
19 | implementation of those and conversion into  
20 | computer algorithms is kept classified, but the  
21 | necessary knowledge is being developed unclassified  
22 | in various external research programs, often using  
23 | alternative materials, and that knowledge can very  
24 | easily be extended into the weapons domain.

27/01.01,  
26.01

25 | And finally, there's the use of fissile

28/26.01

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1 | materials in the national ignition facility, a step  
2 | that DOE expressly denied it was interested in, and  
3 | essentially lied about when Congress first provided  
4 | funds for construction for this facility back in  
5 | 1997.

28/26.01  
cont.

6 | I'd like my written statement to be  
7 | made part of the record.

8 | FACILITATOR BROWN: Thanks.

9 | Jim Bridgman.

10 | MR. BRIDGMAN: Good morning, my name is  
11 | Jim Bridgman. I'm the Program Director at the  
12 | Alliance for Nuclear Accountability. The Alliance  
13 | for Nuclear Accountability is a national network of  
14 | over 30 organizations working together to ensure  
15 | quality clean up of the nuclear weapons complex  
16 | while trying to prevent future contamination and  
17 | health effects by opposing unnecessary nuclear  
18 | weapons research, development, production, testing  
19 | and above all their use.

20 | The Alliance for Nuclear Accountability  
21 | has long been a champion of public participation  
22 | and recognizes this opportunity required by the  
23 | National Environmental Policy Act to comment on the  
24 | Department of Energy's plans for one of the  
25 | Nation's most significant nuclear weapons

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1 laboratories.

2 The plans for Livermore contained in  
3 this document speak volumes about the intended  
4 future mission of the nuclear weapons complex. The  
5 term stockpile enrichment, not stockpile  
6 stewardship, would more accurately reflect the  
7 ambitious and expensive course the Bush  
8 Administration has laid out for modernizing the  
9 arsenal and weapons complex in ways that far  
10 surpass a mission of stewardship for a declining  
11 arsenal.

12 DOE's stockpile enrichment at Livermore  
13 includes plans to increase storage limits of  
14 plutonium from 1,500 to 3,300 pounds. What does  
15 this mean? Plutonium is about ten times more toxic  
16 than nerve gas. Dispersion of just 3-1/2 ounces of  
17 plutonium could kill every person in a large office  
18 building. Thirty-three hundred pounds is enough  
19 for over 15,000 such dirty bombs, and enough for  
20 over 500 nuclear warheads.

29/33.01

21 Allowing this kind of material in an  
22 area like Livermore, that has 75,000 people, 20,000  
23 families, and a population density of 3,000 people  
24 per square mile, for the purpose of national  
25 security is the height of irony and

30/23.01

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1 irresponsibility. And, I might add that the  
2 terrorist threats of theft are, therefore, an  
3 environmental and public health risk.

31/30.01

4 In addition to using this plutonium in  
5 experiments for the national ignition facility and  
6 AVLIS that DOE wants Livermore to develop the  
7 production line prototype for a modern pit  
8 facility, so it can try to figure out how to make  
9 the very messy job of creating plutonium pits, the  
10 cores and triggers of modern nuclear weapons, into  
11 a less messy one.

12 DOE's plutonium pit production at Rocky  
13 Flats was shut down after an FBI raid in 1989,  
14 because of dangerous fires in the " environmental  
15 contamination and mismanagement, costing U.S.  
16 taxpayers more than \$7 billion to partially clean  
17 up.

32/37.01

18 The DOE wants Livermore to gin up some  
19 new plutonium pit production techniques using  
20 robotics, so it can pretend that making nuclear  
21 weapons is not such a big deal. Yet, making  
22 nuclear weapons is, and always will be, a very big  
23 deal, whether it's done in the United States or any  
24 other country in the world.

25 Livermore is to help lay the groundwork

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1 for a new plutonium bomb plant that will cost  
 2 taxpayers billions of dollars to construct,  
 3 hundreds of millions to operate each year, and  
 4 billions more to clean up. The modern pit facility  
 5 would, according to DOE plans, produce 125 to 450  
 6 pits per year, to maintain a "war size nuclear  
 7 arsenal." Yet, the United States is a wash in  
 8 plutonium pits, with over 10,000 in tact warheads  
 9 and another estimated 12 to 15,000 pits in storage  
 10 at the Pantex Plant in Texas. These pits are not  
 11 falling apart, as some members of Congress and  
 12 officials claim, studies by the DOE's own lab  
 13 scientists have shown plutonium pits are lasting  
 14 much longer than previously believed.

32/37.01  
cont.

15 The United States should be reducing  
 16 its arsenal, not building new weapons, as agreed to  
 17 both in the recent Strategic Offensive Reductions  
 18 Treaty between the United States and Russia, and in  
 19 the mandate to disarm its nuclear arsenals under  
 20 Article 6 of the Non-Proliferation Treaty, the  
 21 treaty having more participants than any other  
 22 treaty outside the U.N. Charter, and which the  
 23 United States affirmed as recently as 2000, during  
 24 the MPT Review Conference.

33/01.01

25 Implementing reductions in the

32/37.01  
cont.

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1 stockpile will enable the United States to jettison  
 2 its older warheads, thus further lowering the  
 3 average age of the stockpile and further delaying  
 4 any need for new plutonium pits.

32/37.01  
cont.

5 The DOE doesn't just want the ability  
 6 to produce replacement warheads for the massive  
 7 arsenal, however, it wants to have the ability to  
 8 build new kinds of nuclear warheads, so-called  
 9 "mini-nucs," new cruise missile warheads and other  
 10 advanced concepts. Building such weapons could  
 11 well lead to a resumption of their testing.

12 The production and testing of new types  
 13 of nuclear weapons would send a crystal clear  
 14 message to the rest of the world, the United States  
 15 has no interest in nuclear arms control unless it  
 16 means controlling other nations' nuclear weapons.  
 17 We strongly oppose this Administration's vision  
 18 that would allow the United States to remain an  
 19 entrenched nuclear power, that prioritizes counter-  
 20 proliferation over non-proliferation, reduction of  
 21 weapons of mass destruction above the production of  
 22 good will through diplomacy.

34/02.01

23 The Alliance for Nuclear Accountability  
 24 strongly supports an action alternative for  
 25 Livermore that seeks an orderly phase out of its

35/08.02

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1 nuclear weapons programs in observance with the  
2 Non-Proliferation Treaty, that seeks to foster cost  
3 of research that is truly beneficial to human  
4 health and the environment. This plan, by  
5 comparison, is an imitation disaster, both in the  
6 risks it imposes on the Livermore community, and in  
7 the threat it poses to the global non-proliferation  
8 regime.

35/08.02  
cont.

9 At a time of record budget deficits,  
10 the Livermore plan will be charged on the national  
11 credit card for the future generations to pay, the  
12 same generations that will have to pay for the  
13 health care and clean up in and around the  
14 Livermore site. What a risk.

36/03.01

15 FACILITATOR BROWN: Thanks.

16 That concludes the list of speakers who  
17 signed up ahead of time. If there's anybody here  
18 who would like to make further comments, or add to  
19 the comments you made, you are certainly welcome to  
20 do so.

21 Diane, okay.

22 MS. D'ARRIGO: Hi, I'm Diane D'Arrigo  
23 with Nuclear Information and Resource Service. We  
24 are a 25-year old, Washington-based, D.C.  
25 organization which has affiliates around the world

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1 actually, with the World Information Service on  
2 Energy.

3 We have very serious concerns about the  
4 ten-year plan for Livermore and its potential to "  
5 well, its clear intent to create more radioactive  
6 waste, to double the amount of plutonium that can  
7 be on the site, to bring ten times higher amounts  
8 of tritium to the site, to create waste that will  
9 be routinely emitted into the air and water in the  
10 vicinity, and for which there's no safe, permanent  
11 solution.

37/04.01

12 And so, our concerns are largely  
13 environmental, but we also believe that there's no  
14 good reason for the increases in the risks and the  
15 threats. Plutonium is clearly one of the most  
16 toxic elements in the world, and to handle it in  
17 the way that's proposed, aerosolizing and the AVLIS  
18 project, we are on record as opposing these  
19 projects in the past, and repeat that opposition  
20 today.

38/27.01

21 Adding to the radioactive risks of bio  
22 warfare agents is foolhardy and unacceptable. We  
23 oppose the plans for the AVLIS, for the tritium  
24 targets, for the increase in the plutonium limits,  
25 in the increase in the tritium level that would be

37/04.01  
cont.

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1 allowed on site. We oppose the steps that this  
2 would bring to " the steps that this would take to 37/04.01  
3 bring us to renewed testing, at the Nevada Test cont.  
4 Site or elsewhere.

5 The nuclear weapons complex clearly has  
6 no plan for what to do, no acceptable plan for what  
7 to do with the wastes that have already been  
8 generated. Our organization is working to prevent  
9 the current plans and the current activities of the  
10 Department of Energy to routinely release these  
11 materials into every-day consumer goods, recycling

12 and releasing these materials as if not radioactive 39/22.04  
13 is part of the management plan for radioactive  
14 waste that's generated. We have expressed our  
15 opposition to the existing Order 5400.5, and all of  
16 the efforts that the Department has made to reverse  
17 the ban that was put in place on recycling  
18 radioactive metal, believe that moving in this  
19 direction at this site is a step in the wrong  
20 direction, and also have concerns about the

21 Environmental Species Act violations, the " you 40/16.03  
22 know, increasing the kill rate, the acceptable  
23 takings.

24 And, of course, in a seismic area there 41/14.01  
25 are operational problems. We are currently

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1 intervening in many commercial reactor situations,  
2 based on the technical dangers of nuclear  
3 technology and believe that adding a bio warfare 41/14.01  
4 agent program and accelerating plutonium and other cont.  
5 activities, tritium activities, in such close  
6 proximity to clear seismic dangers is also  
7 foolhardy.

8 We support the conversion of the lab to  
9 civilian research, and believe that the efforts  
10 should be put toward cleaning up the site  
11 completely to isolating the waste, not disbursing 42/07.01  
12 it, pretending it's not radioactive, and creating  
13 more wastes, when you've got nothing to do with  
14 what we've already generated.

15 Thank you.

16 FACILITATOR BROWN: Okay.

17 Is there anybody else who would like to  
18 add comments at this time?

19 Okay, we are scheduled, officially, I  
20 think to run somewhat longer, so customarily what  
21 we do in these circumstances is, we take a recess,  
22 folks are free at this point to talk to your  
23 neighbors, talk to DOE, head for home, whatever,  
24 and if someone decides they'd like to add comments,  
25 or if someone else shows up to speak, we will

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1 reconvene and take their statement.

2 So, we will recess at this point.

3 Thank you.

4 (Whereupon, at 11:57 a.m., a recess  
5 until 12:59 p.m.)

6 FACILITATOR BROWN: It's 1:00, and I'm  
7 reconvening the Washington meeting of the Site-Wide  
8 Environmental Impact Statement, and asking if there  
9 are any other members of the public who would like  
10 to make a statement at this time?

11 Noting that there are no members of the  
12 public present at this point, and it being 1:00,  
13 this meeting is officially adjourned.

14 Thanks very much.

15 (Whereupon, the above-entitled matter  
16 was concluded at 12:59 p.m.)

17

18

19

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**Q**  
**No Submittals for this letter**

Raycraft, Susan M.  
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Raycraft, Susan M.  
Page 2 of 4

Susan Raycraft  
PO Box 165  
Lockwood, Ca 93932

May 27, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01 I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them. It is not in the interest of peace, nor of the safety of people living in the surrounding area to increase plutonium storage at Livermore Lab!

3/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a

3/27.01, 33.01 cont. scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds &#8211; a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project. How can the United States, while making war on other nations with the goal of eliminating &#8220;weapons of mass destruction&#8221; jump start the nuclear arms race? How can it turn the clock back, and walk away from its values?

4/26.01, 26.03 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it. I urge those in policy-making positions to consider these dangerous actions and not allow the dangerous reckless people running the most massive system of mass destruction ever seen on the planet to make matters worse by taking these actions at Livermore Lab!

5/37.01 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China &#8212; each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project. I urge you in your role to consider the entire matter from all perspectives to deny these new and dangerous directions at Livermore Lab.

6/39.01 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests. Nuclear testing is unnecessary and dangerous. Please do not restart

Raycraft, Susan M.  
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6/39.01 | it in the country that is better armed than any country ever in the  
cont. | history of the world already.

6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California.

7/35.01 | Interestingly, this program is listed as part of LLNL&#8217;s "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

10/04.01 | Please, as the department with responsibility for the entire energy policy of the most powerful nation on earth, do not give in to the fear-sayers and loose sight of the larger picture. Alternative energy sources are being all but abandoned in the rush to fund the ones that have created such havoc in the world already. Nuclear war will be unavoidable if the US abandons its leadership and runs in fear into the past from which it so hopefully emerged with the end of the so-called &#8220;Cold War.&#8221; These dangerous steps threaten to intensify the likelihood of a true hot war in this century, and the government that spends all its rhetoric on how much better they are than the &#8220;evil&#8221; enemies should see these plans for what they are: reckless, short-sighted and contrary to all the democratic principles we say we stand for. If adopted, these new plans at Livermore Lab will show the world we pay only lip service to our

10/04.01 | responsibility to lead the world toward peace and freedom, and promote  
cont. | true democracy. Listen to the voices of your own people! Do not allow these dangerous, dramatic shifts in the heart of our most populous state, at the risk of the health and safety of its residents, and the peace and security of the entire world. Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

Sincerely,

Susan M. Raycraft

Reddy, Ajay  
Page 1 of 1

Dear Mr. Grim,

I am deeply concerned about the revival of nuclear weapons programs. Mutually assured destruction is one of the stupidest ideas ever. Watch Dr. Strangelove sometimes. Also, I would request that you do not develop methods to spread anthrax ~~within~~ close to my house.

Thank you,  
Ajay Reddy

Reid, Heather  
Page 1 of 1

*Heather Reid*  
P.O. Box 3224  
Martinez, CA 94553  
H-925-370-8013, W-925-279-3480 x103

May 3, 2004

FAX: 925-422-1776

Mr Tom Grim  
DOE, NNSA  
L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/04.01 I recently became aware of a proposed plan to ramp up nuclear weapons activities and double the plutonium at Livermore Lab. I am very concerned about this proposal. This could weaken the international biological weapons treaty and it poses a risk to workers, the public and the environment here in the Bay Area.

2/27.01 Plutonium Atomic Vapor Laser Isotope Separation is a health risk and a nuclear proliferation nightmare. One microscopic particle of plutonium, if inhaled, can cause lung cancer or other diseases. It must be stopped!

3/26.01 The National Ignition Facility will increase the amount of airborne radioactivity emanating from Livermore Lab. I implore you to stop the National Ignition Facility and the dangerous and new experiments in it.

Thank you for your consideration and immediate action against the above.

Sincerely,  
*Heather Reid*  
Heather Reid

Reim, Nancy  
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Rendon, Mark  
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1/24.01

D.O.E. People: May 2004

There are already too many weapons, nuclear and otherwise. Livermore Lab has already done great harm through its development of weapons and its pollution of the environment, near and far. It will do a lot more if its present plans are enacted. The risks will greatly increase if the N.I.F. targets are made there, along with plutonium bomb cores, and much more plutonium is stored and used on site. If nuclear testing as well as biological weapons testing is carried out by the U.S. government, at Livermore or elsewhere, it will encourage other nations to do the same and will provide targets for enemies. This is already happening. Heed the warnings of Einstein and Oppenheimer, the top nuclear scientists and bomb makers.

2/02.01

3/35.01

4/20.01

4/20.01

5/07.01

4/20.01

Note: News Articles attached with this submittal are included in the Administrative Record.

-----Original Message-----  
**From:** Mark Rendon [mailto:mrendon28@hotmail.com]  
**Sent:** Wednesday, April 28, 2004 11:53 AM  
**To:** tom.grim@oak.doe.gov  
**Subject:** Livermore Lab

Dear Mr. Grim,

1/04.01 | My name is Mark Rendon. I'm writing to express my opposition to any expansion of nuclear development at Livermore Lab (LL). In fact, we have to transform the LL to a lab for renewable energy.

2/07.01 |

3/01.03 | Currently, the US has enough nuclear bombs to destroy the planet many times over! It's insane to ever use a nuclear bomb again. We have to make it personal: we'll all be dead if we use nuclear weapons!

4/26.01 | We have to dismantle all nuclear weapons immediately. Toward this effort, we have to shut down the National Ignition Facility now. The government cancelled the Atomic Vapor Laser Isotope Separation project years ago: don't start that program again!

5/27.01 |

6/23.02 | The LL puts the LL workers at risk of cancer. We're wasting billions of dollars on useless bombs when we need that money for healthcare, education, and other social services. We have to put our tax dollars for creative projects not destruction.

7/03.01 |

Thank you for your attention to my letter.

Sincerely,

Mark Rendon  
 1338 Hearst Ave.  
 Berkeley, CA 94702

Rentz, Tanya  
Page 1 of 1

Reynolds, Joan  
Page 1 of 1



**Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement**



**U.S. Department of Energy  
National Nuclear Security Administration**

**Written Comment Form**  
*Must be received on or before May 27, 2004.*

1/07.01 Dear Mr. Grim,  
I urge you to change the Lawrence  
Livermore laboratory to civilian research.  
Please vote for life!

2/23.01 Contamination of water and soil serves neither  
your family, nor mine, nor that of the inhabitants of  
Livermore, nor of the surrounding area.  
The ground and water in Livermore already  
needs to be cleaned up.

3/23.02 Plutonium + tritium ~~are~~ have been proven to  
contribute to, if not cause, cancer - melanoma and  
brain tumors levels in children in Livermore are  
higher than in other areas. For life!

Tanya Rentz  
1017 W. Olympia Dr.  
Green Valley, CA 95945  
530-477-0683

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

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

From: JoanMReynolds@webtv.net [mailto:JoanMReynolds@webtv.net]  
Sent: Wednesday, April 14, 2004 2:16 PM  
To: tom.grim@oak.doe.gov  
Subject: Nuclear Wasteland

1/02.01 Stop Livermore Lab's development of new and exotic nuclear weapons. Do  
not allow underground Nuclear Tests. Nuclear weapons can only destroy  
the complete planet, EARTH, no profit is gained on a DEAD PLANET. Joan  
Reynolds 43 Clipper Lane, Port Ludlow, WA 98365

Rich Buckley Realty, Rich Buckley  
Page 1 of 3

Rich Buckley Realty, Rich Buckley  
Page 2 of 3

**From the desk of: Rich Buckley**  
www.BuckleyRealty.com

Rich Buckley Realty  
Office: 925-443-1122  
Cell: 925-216-4378  
Fax: 925-215-2058  
Page 1 of 1

May 27, 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Re: LLNL operations report

Tom,

1/04.01 | You'll never hear about support that goes in on these cards so here's one vote for you.

Sincerely,  
**RICH BUCKLEY REALTY**

*Rich Buckley*  
Rich Buckley  
CC: Rep Tauscher  
CC: Sen Feinstein  
CC: Sen Boxer

Rich Buckley Realty  
411 So. L St.  
Livermore, CA 94550

**To:**  
Sen. Dianne Feinstein  
331 Senate Hart  
Washington, DC 20510

**To:**  
Sen. Barbara Boxer  
112 Senate Hart  
Washington, DC 20510

**To:**  
Rep. Ellen O. Tauscher  
1034 Longworth  
Washington, D.C. 20515

**To:**  
Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

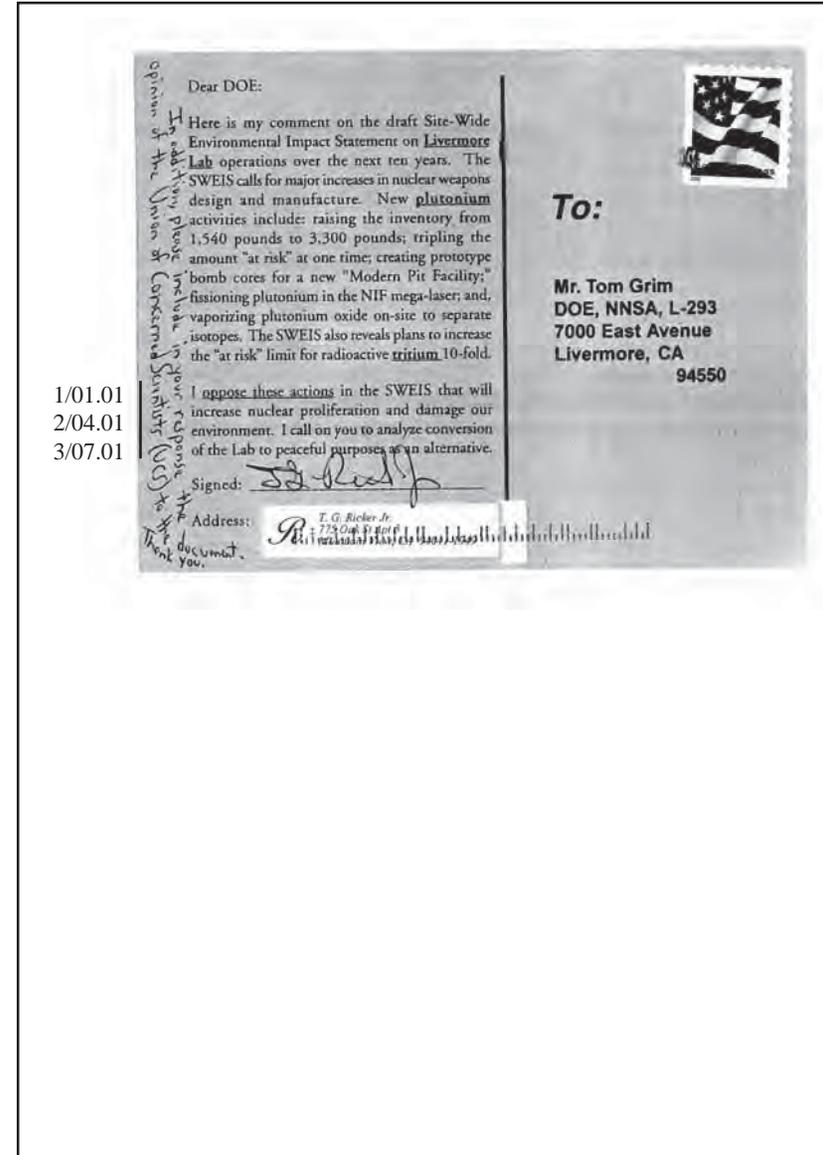
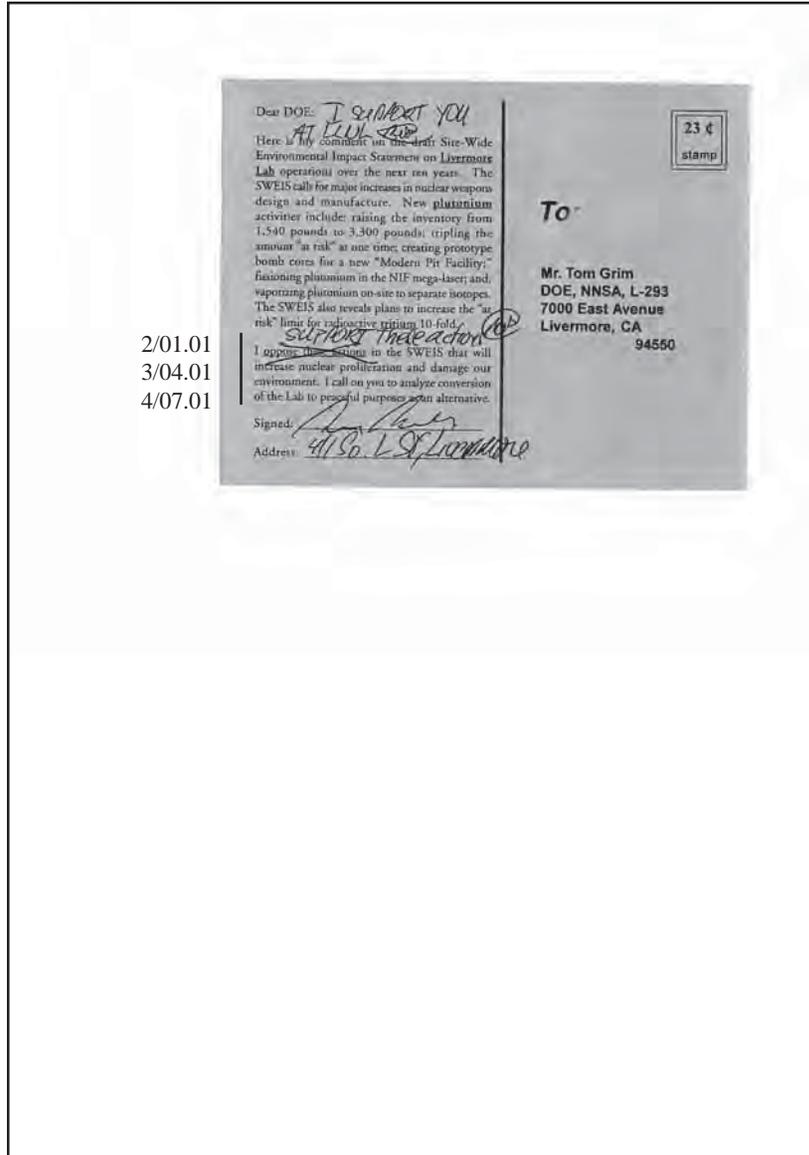
**Dear Senator Feinstein:**  
The Dept. of Energy released a draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SW/ES card I signed for major increases in nuclear weapons design and manufacture. New plutonium activities include raising the inventory from 1,540 pounds to 3,500 pounds; tripling the amount of "at risk" at one time; creating prototype bomb cores for a new "Modern Pl" Facility; focusing plutonium in the NIF megajoule and vapouring plutonium to separate isotopes. The SW/ES also reveals plans to increase "at risk" limit for radioactive plutonium. I ask you to let us record your views on this action in the SW/ES and help us our profession and help our environment.  
Signed: *Rich Buckley*  
Address: 411 So. L St. Livermore, CA 94550

**Dear Senator Boxer:**  
The Dept. of Energy released a draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SW/ES card I signed for major increases in nuclear weapons design and manufacture. New plutonium activities include raising the inventory from 1,540 pounds to 3,500 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pl" Facility; focusing plutonium in the NIF megajoule and vapouring plutonium to separate isotopes. The SW/ES also reveals plans to increase the "at risk" limit for radioactive plutonium. I ask you to let us record your views on this action in the SW/ES and help us our profession and help our environment.  
Signed: *Rich Buckley*  
Address: 411 So. L St. Livermore, CA 94550

**Dear DOE:** I signed your SW/ES card for major increases in nuclear weapons design and manufacture. New plutonium activities include raising the inventory from 1,540 pounds to 3,500 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pl" Facility; focusing plutonium in the NIF megajoule and vapouring plutonium to separate isotopes. The SW/ES also reveals plans to increase the "at risk" limit for radioactive plutonium. I ask you to let us record your views on this action in the SW/ES and help us our profession and help our environment. I call on you to analyze conversion of the Lab to peaceful purposes again. I signed your SW/ES card for major increases in nuclear weapons design and manufacture. New plutonium activities include raising the inventory from 1,540 pounds to 3,500 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pl" Facility; focusing plutonium in the NIF megajoule and vapouring plutonium to separate isotopes. The SW/ES also reveals plans to increase the "at risk" limit for radioactive plutonium. I ask you to let us record your views on this action in the SW/ES and help us our profession and help our environment.  
Signed: *Rich Buckley*  
Address: 411 So. L St. Livermore, CA 94550

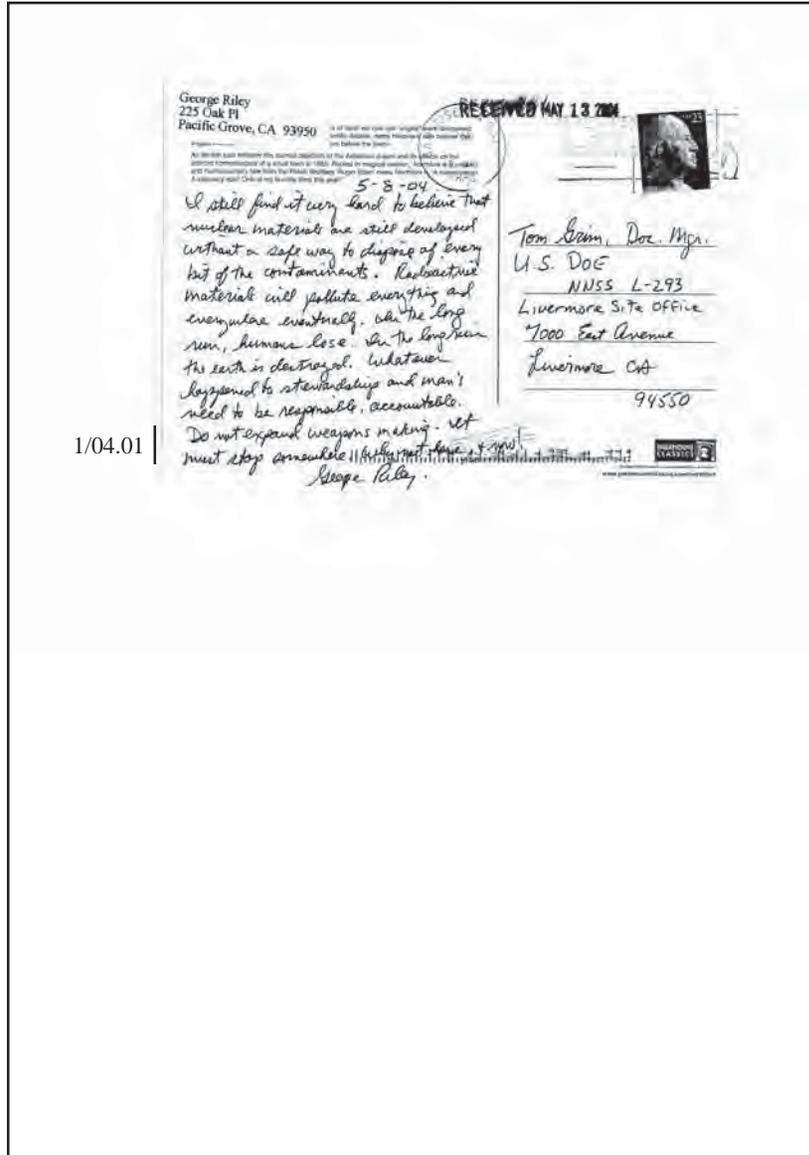
Rich Buckley Realty, Rich Buckley  
Page 3 of 3

Ricker, Jr., T.G.  
Page 1 of 1

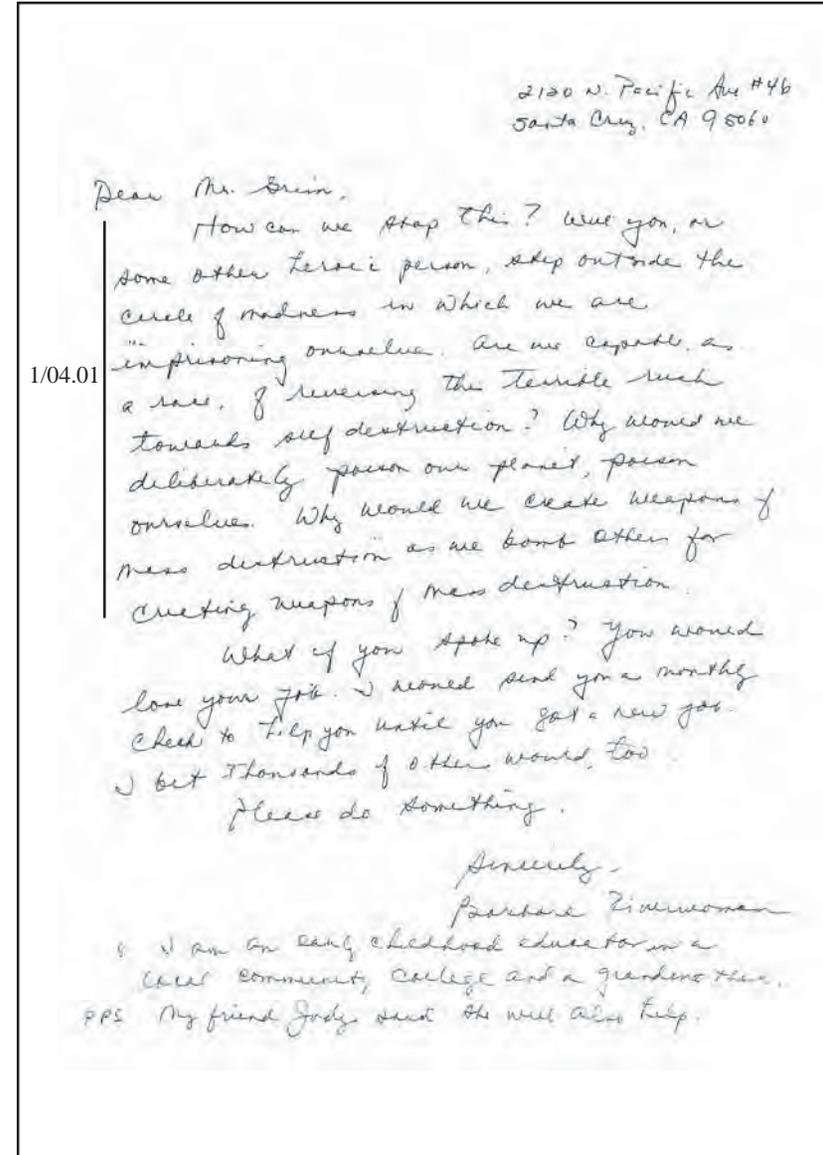


Riley, George  
Page 1 of 1

Riverwoman, Barbara  
Page 1 of 1



1/04.01



1/04.01

Rothenberg, P.E., Keith  
Page 1 of 2

Rothenberg, P.E., Keith  
Page 2 of 2

May 21, 2004

Mr. Tom Grim, Documents Manager  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Dear Mr. Grim,

My name is Keith Rothenberg and I have been a homeowner in Livermore, CA since 1983. I am a native Californian and my family has resided in the Modesto area since 1920. I am an energy efficiency engineer and I own a business that reduces energy consumption in industrial and commercial buildings. I am the founder and current director of the Friends of Sycamore Grove, a local environmental group promoting the health and sustenance of California's 3<sup>rd</sup> largest stand of Sycamore trees.

1/17.06 I have familiarized myself with the Site-Wide Environmental Impact Statement and the Lab's 10-year plan for Site 300. I am deeply concerned about the potential impact on the wildlife at Site 300, as well as about the air quality for residents of Tracy and the larger  
2/04.02 Central Valley. I understand that the lab is proposing to build a 40,000-square foot high explosives processing facility with four magazines storing up to 3000 pounds of high explosives. I also understand that open air explosives testing on a weekly to daily basis is proposed just one mile from the site's northern border.

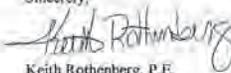
3/16.05 As a conservationist, I am concerned about the preservation of California's wildlife and endangered species. The proposed explosives testing may injure or kill Golden Eagles, Prairie Falcons, Northern Harriers, Black-Shouldered Kites, Ferruginous Hawks and Red-Tailed Hawks due to flying debris and shock overpressure. Your operations under any alternative could also affect SIX federally listed endangered or threatened or candidate species due to possible disturbance of habitat. These are the CA Red-Legged Frog, CA Tiger Salamander, Alameda Whipsnake, San Joaquin Kitfox, Valley Elderberry Longhorned Beetle and the Large-Flowered Fiddleneck (which was thought to be extinct in California).

4/16.03 Plans in the SWEIS also require a greater than ever "take" of wildlife and violate the DOE'S current agreement with the US Fish and Wildlife to limit the harm and killing of wildlife to 25 species. The plan further proposes the "termination" of a wetland known as  
5/16.02 a breeding pond for the CA Red-Legged Frog and, alternatively, creating a wetland at the Sharp Facility which is known to have "low concentrations" of tritium. I find these plans unacceptable.

6/16.04 Site 300 is amidst one the largest native grasslands of this kind currently known in California. Considering the disruption to the grasslands and the many wildlife threats mentioned above, the SWEIS plan is out of line in its proposed destructive impact on nature and habitat.

7/08.01 I believe that it is essential to preserve the state's remaining plant and animal refuges. Please move open air testing to deserted places where fewer species reside. The storage and testing of explosives should occur in an area of the country where there are limited pressures of population growth and agriculture. Why add pollutants to the already compromised air quality of the growing central valley? Tracy already has  
8/24.02 an elevated inhalation cancer risk, as do Manteca and Stockton. Do not execute a plan which will increase air and ground pollution and which will further deplete our local our wildlife heritage, particularly the endangered and at-risk species.

Sincerely,



Keith Rothenberg, P.E.  
23 Diamond Dr.  
Livermore, CA 94550

CC: Senators Diane Feinstein and Barbara Boxer, Rep. Ellen Tauscher

San Francisco Bay Regional Water Quality Control Board, Naomi L. Feger,  
Remedial Project Manager  
Page 1 of 1

Sarvey, Bob  
Page 1 of 8

RECEIVED MAY 21 2004 01606

**Grim, Tom**

From: Naomi Feger [Nlf@rb2.swrcb.ca.gov]  
Sent: Friday, May 21, 2004 3:37 PM  
To: tom.grim@oak.doe.gov  
Subject: re: LLNL SWEIS

  
Naomi Feger.vcf  
(255 B)

1/31.02 Dear Mr. Grim - I would like to request an extension to the comment period on the LLNL  
Site-wide EIS. The public notice advising that the public comment period closes on May 27, 2004  
was received in this office on May 20, 2004 and I will be unable to complete my review by that date.  
Please allow a 30-day extension to this deadline.

Very Truly Yours,  
Naomi Feger  
Naomi L. Feger  
Remedial Project Manager  
SF Bay RWQCB  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

April 15, 2004

Thomas Grim, Livermore Site Office Document Manager  
NNSA  
7000 East Avenue, MS L-293  
Livermore, CA 94550-9234

Fax: (925)422-1776  
Email: tom.grim@oak.doe.gov

RE: DOE/EIS-0348 and DOE/EIS-0236-S3

Dear Mr. Grim:

On behalf of TRAQ, representing residents of Tracy and San Joaquin County, I wish to  
thank you for the opportunity to make these comments. Our comments focus on Site 300,  
Livermore Lab's high explosives test site in Tracy.

1/17.01 **1. Radioactive tritium (or any other radioactive substance such as depleted  
uranium) should not be allowed in "shots" --test explosions -- at Site 300 nor in  
environmental testing of explosives assemblies that release radioactive tritium  
into the environment.**

Detonation experiments containing tritium at Site 300 firing tables or the Building 801  
Contained Firing Facility, resulting in a maximum annual tritium emissions of 200-  
curies in the No Action Alternative are unacceptable. Even the current allowable 150  
curie limit is unacceptable.

The community was assured in the 1992 SWEIS public hearings that no tritium would  
be used in shots. Please describe what is actually occurring in terms of releases of  
radioactive substances being used in shots, environmental testing of explosives  
assemblies or in other experiments.

2/23.01 **2. No increased dose to workers or the community should be allowed.**

The ionizing dose to the general public was 0.5 person-rem per year from the  
Livermore site and 2.5 person-rem per year from Site 300 in 2002. The population  
dose to the general public under all three alternatives would increase to 1.8 person-rem  
per year from the Livermore Site and 9.8 person-rem per year from Site 300. The  
corresponding LCFs for all three alternatives would be 1.1 x 10 to the minus 3 from the  
Livermore site and 5.9 x 10 to the minus 3 from Site 300.

3/29.01 **3. Please provide agreements and arrangements made with fire protection, police,  
security and emergency services for incidents that may occur at Site 300.**

These arrangements and agreements must be available in order for the community to  
evaluate their adequacy. This information should include incidents that occur when

Sarvey, Bob  
Page 2 of 8

3/29.01 cont.	explosives or other potential harmful hazardous, radiological or biological substances are being transported to or from Site 300 via car, truck or airplane. This information should include potential impacts on local airports, too.
4/14.01	<p><b>4. Do Not Increase Dangerous Projects in a Seismically Active Area</b></p> <p>Many buildings at LLNL have potential seismic difficulties. Some buildings at LLNL do not comply with federal seismic standards, have unacceptable seismic risks, need "detailed evaluation" to determine the seismic risk level including buildings where hazardous, radioactive or other substances that may harm the public or the environment are stored or involved in work processes. Please describe in detail all of these buildings at Site 300 and how they are used and what measures are being taken or planned to bring them up to code and when.</p> <p>At least two fault run through Site 300 and others run near Site 300. There is a lot of uncertainty around the amount of hazard that these faults pose. The lab should error on the side of caution and not explosive processing and storage facilities near or in the vicinity of these fault areas. Please describe the relationship of all planned activities to fault zones, potential harms/damages from an earthquake at the highest reasonably expected level and what if any precautions have been or will be taken to mitigate harm.</p> <p>The faults that run through Site 300 are not well understood, particularly how they might divert radioactive or hazardous groundwater plumes to new pristine water bodies or soil that rain could then carry to pristine waters. Please elaborate on this issue in the SP/SWEIS.</p> <p>In January of 1980 - 5.9 Quake along Greenville Fault in Livermore Area - Injured 44 people - Cost lab 10 million. Please describe if any damage has been done to Site 300 by earthquakes in the past or if damage is anticipated if a large quake should occur on a fault in Site 300 or within an area that could impact Site 300.</p>
5/16.04	<p><b>2. Preserve the local Environment and protect Endangered Species</b></p> <p>The lab's site 300 "could be judged one of the largest native grasslands of this kind currently known in California." Please describe if there are other comparable grasslands and the value of this land, particularly in view of the fact that resources of this type continue to be lost. Please determine if there are other sites where the explosives tests could occur that would allow this grassland to be preserved. We would like to see a cost-benefit analysis with alternatives evaluated.</p>
6/25.03	At this site the Lab is proposing to build a new Energetic Materials Processing Center; a 40,000-square foot (High Explosives) processing facility with four magazines for storing up to 3,000 pounds of high explosives. Please describe the range of possible impacts should the high explosives detonate accidentally and unexpectedly.
7/16.05	Explosives Testing will occur one mile from sites Northern Border, on a "weekly to daily" basis that will primarily affect birds. Diurnal raptors that forage directly over the facilities are the species most vulnerable to flying debris and shock overpressure.

Sarvey, Bob  
Page 3 of 8

7/16.05 cont.	Some of the birds listed as possibly affected include the Golden Eagle, Prairie Falcon, Northern Harrier, Black-Shouldered Kite, Ferruginous Hawk and Red-Tailed Hawk. What other impacts might this testing have? What will the potential impact be on these bird populations and their habitat. Is there other habitat that it is realistic to expect them to use?
8/16.03	Operations under any alternative could potentially affect six federally listed endangered, threatened, proposed threatened, or candidate species due to potential disturbance of habitat including the California Red-Legged Frog and the California Tiger Salamander. Please describe specifically the potential impacts on these populations. What other animals or plants may be affected?
9/16.02	<p>Plans in the SWEIS will violate the DOE's current agreement with the US Fish &amp; Wildlife to "take" (to harm or kill) 25 species - new projects will require a greater "take". Are there alternatives that would prevent or lower the rate of death of these species by modifying your work processes, making do with current buildings, conducting tests somewhere else?</p> <p>A plan to "terminate" a wetland that is a known breeding pond for the California Red-Legged Frog which has been observed breeding there for the past six years. A possible mitigation measure suggested for this proposal is to create a wetland at the Sharp Facility, which they admit, is known to have "low concentrations" of tritium (radioactive hydrogen). Please review studies of potential tritium impacts on frogs that are taken from scientists that have different views on this subject, so that an objective range of opinions is available for the community to review.</p>
10/22.02	<p><b>5. Do not allow increases in waste generation that increase contamination to the air, water or soil at Site 300.</b></p> <p>The proposed plan would allow waste management activities to change to accommodate increased waste generation. Proposed changes would include modifying the permit status of existing facilities to allow different types of waste to be stored or treated, e.g. obtaining hazardous waste facility permits for areas now used for nonhazardous or radioactive waste management.</p>
11/24.02	<p>The potential issuance of permits in the proposed plans that would increase the allowable amounts of hazardous chemicals at LLNL necessitate an analysis in the SP/SWEIS of the environmental impact of these chemicals and other substances involved.</p> <p>No uncontaminated areas should be contaminated. Safe practices should be the top priority and no current standards, regulations or permits should be modified in any way that allow greater levels of contaminants. Please describe thoroughly if and how increases in contaminants to the air and soil may take place.</p> <p>No pristine water should be polluted and if this is to take place, please provide details about possible contaminants, levels, proposed mitigation, and risks involved.</p>

Sarvey, Bob  
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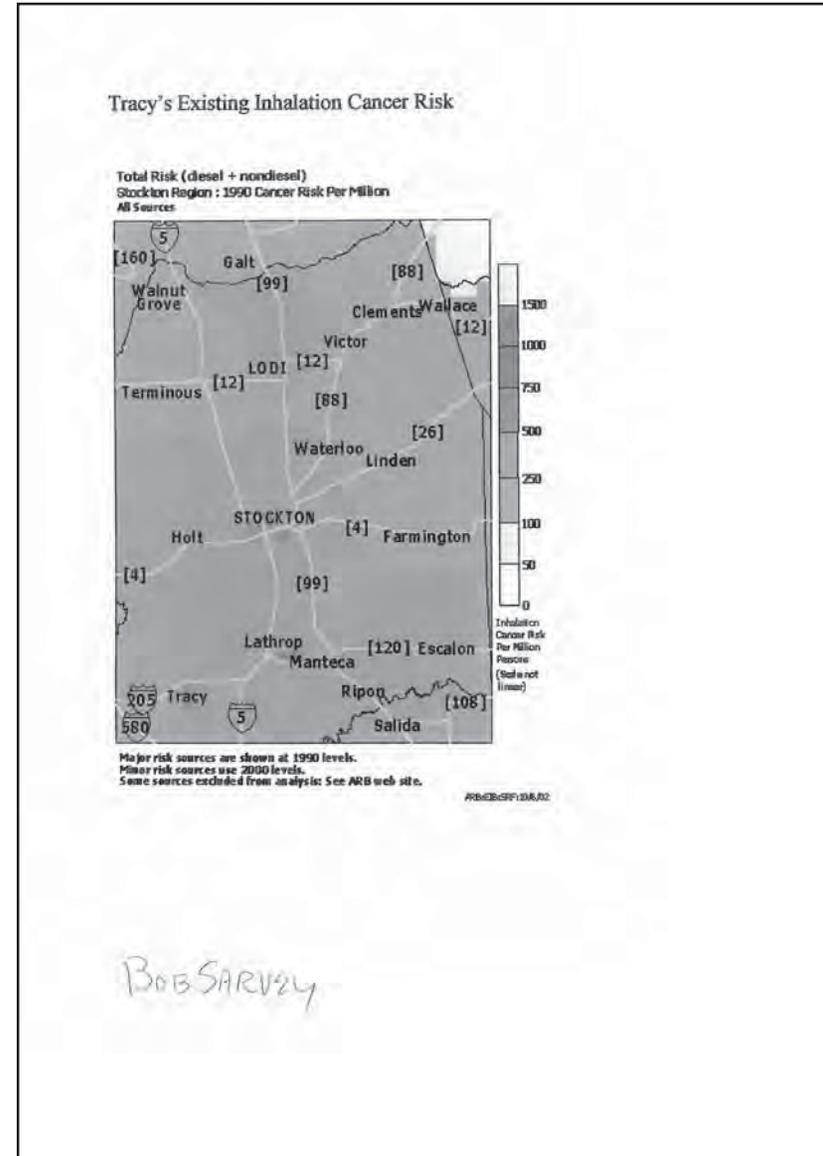
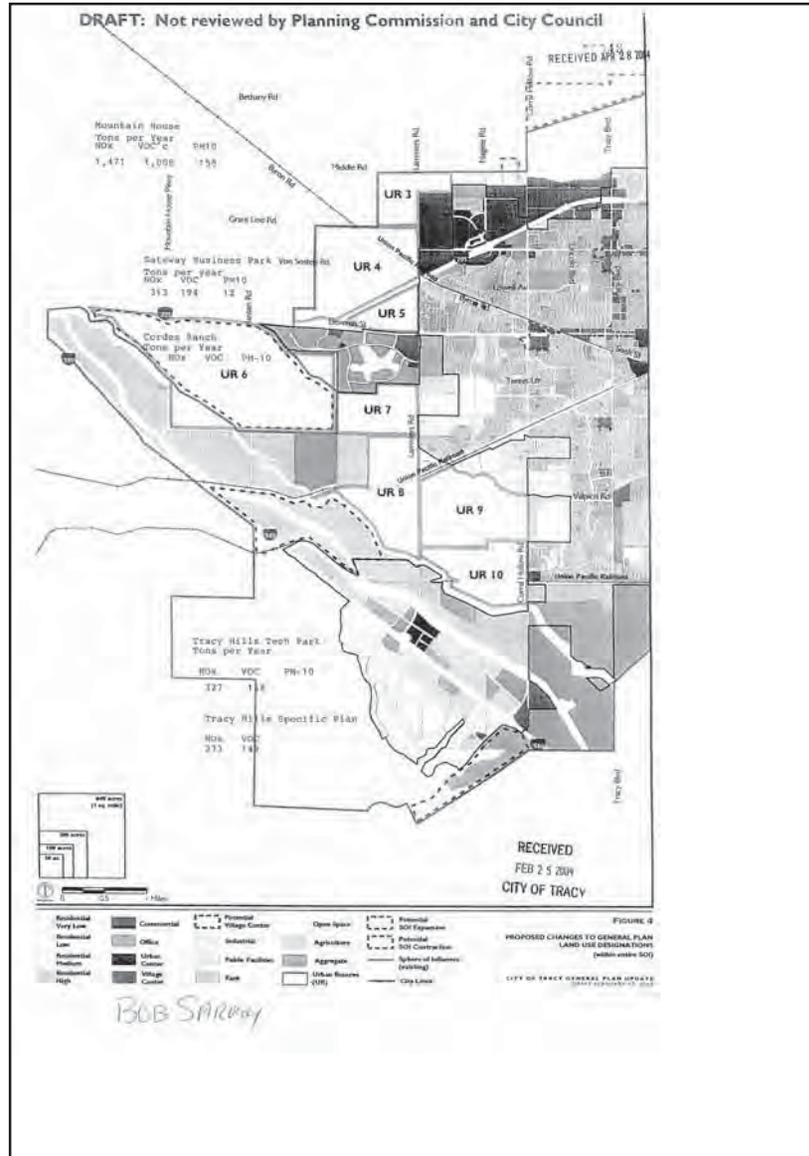
Sarvey, Bob  
Page 5 of 8

10/22.02 cont.	<p>Production or waste should not be increased unless we can be assured that the waste stream will not further pollute Site 300, harm workers or caused an increased risk to Tracy, located 2 miles from the site or other areas. If this previous statement is not true, please describe how, why and occupational protections for workers.</p> <p>What procedures will LLNL use to reduce or maintain current waste stream levels? If waste stream levels will increase, what will the NEPA process be to address the environmental impacts of such increases?</p>
12/17.03	<p><b>6. All decontamination and decommissioning activities have not been thoroughly taken into consideration and should be.</b></p> <p>Please be sure all radiological and nonradiological air quality and decontamination and decommissioning (D&amp;D) is described at Site 300. Also please be sure that the EIS does take into consideration the full range of contaminants that D&amp;D activities may involve. For example, if asbestos contamination is addressed, the discussion must also address any of the other contaminants that may exist in a facility as a result of the particular scientific research that is conducted at Site 300.</p> <p>Discussion of the potential air quality effects of D&amp;D from other sorts of contaminants should be incorporated into the EIS. Buildings or floorspace marked for D&amp;D may have been the site of unique exposure to contaminants that, although not common to all of the D&amp;D activities, warrant consideration because of the singular problems they may pose.</p> <p>Also, the potential effects on air quality from both the transportation and eventual disposal/storage of contaminated demolished facilities needs to be taken into account. The potential for adverse air quality effects exists not only at LLNL, but also at any facility to which D&amp;D materials are transported, as well as the regions through which the materials are transported. Such discussion should be incorporated in the EIS.</p>
13/11.01	<p><b>7. Please complete the National Register of Historic Places evaluation particularly of subsurface prehistoric cultural resources. In addition, vertebrate fossil, shells, leaves and stem deposits at Site 300 should be evaluated further.</b></p> <p>We may have unknown treasures buried in the hills at Site 300 that are far more valuable than using the land for test explosions. Learning the extent of possible prehistoric treasures would better allow protection of such resources and an adequate cost-benefit analysis to determine the best use of this land.</p>
14/06.01	<p>Generally speaking, we hope you will reconsider the Proposed Action alternative and instead chose the reduced action alternative. Livermore Lab should be placing its major resources into research on global warming, energy alternatives -- to end our dependence</p>
15/02.01	<p>on oil, and cleanup technologies for areas already contaminated by radioactive, chemical and biological weapons and waste. Continued and more aggressive nuclear weapons</p>
16/04.01	<p>development and research and research on high-level and genetically-modified biowarfare</p>

16/04.01 cont.	<p>agents further harm our environment, public health, economy and undermine our national security.</p> <p>Once again, let me say that we appreciate the opportunity to be involved in the public hearing process and commenting on the SP/SWEIS that will impact our environment, health and security for the rest of our lives and the lives of our children and grandchildren.</p> <p>Sincerely,</p> 
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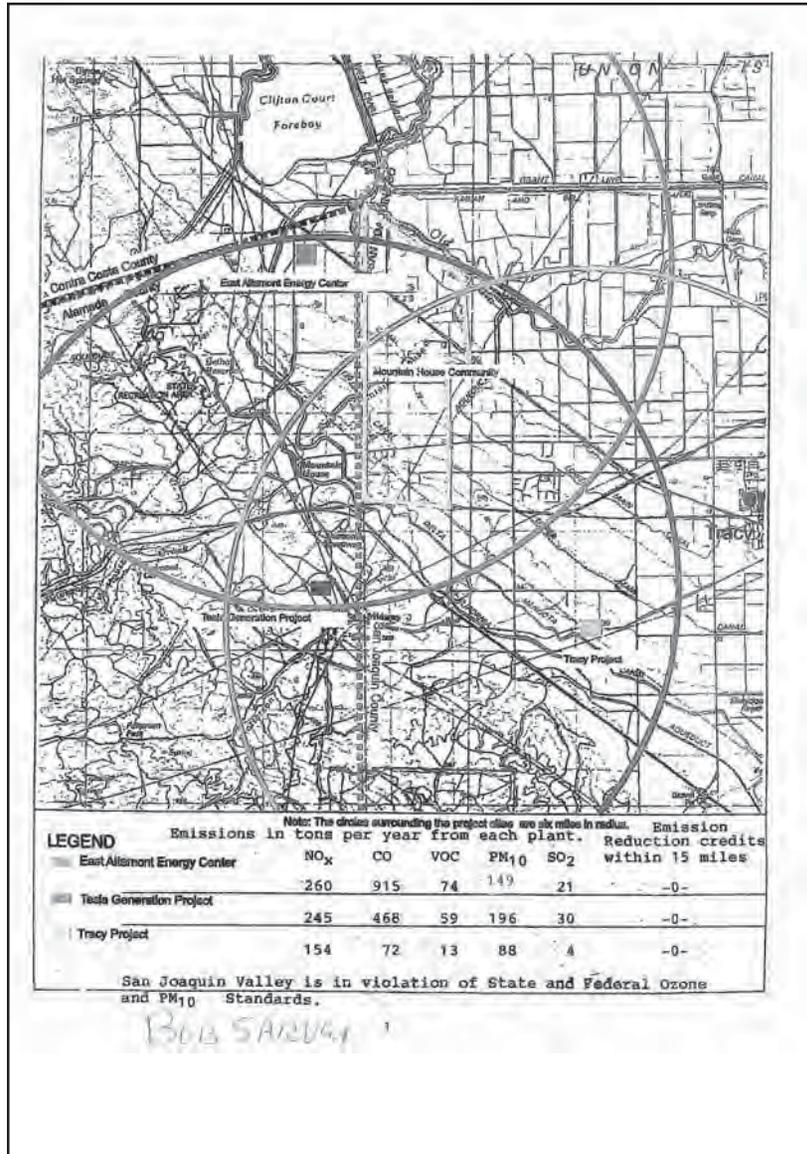
Sarvey, Bob  
Page 6 of 8

Sarvey, Bob  
Page 7 of 8



Sarvey, Bob  
Page 8 of 8

Savage, Matt  
Page 1 of 1



Dear Mr. Grimm,

I am writing in opposition to the Environmental Impact Statement on Livermore Labs planned operations for the next ten years. This plan is terrible for both the environment and for American geopolitical strategies. This plan will double the plutonium limits at labs. It will also revive plutonium atomic vapor laser separation. This will also create the production of 150-450 bomb ~~cores~~ <sup>cores</sup> annually, with ability to run double shifts and produce 900 a year. It will also increase amount of airborne radioactivity. This will also develop diagnostics to "enhance" nation's readiness to resist nuclear tests. And finally, this will restart bio warfare development including on that. These developments are unnecessary, this country doesn't need more weapons or pollution.

1/04/01

Thank you very much for your concern,

Matt Savage

Sawyer, Kathryn S.  
Page 1 of 1

Schleis, Gus  
Page 1 of 2

Dear DOE:

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF mega-laser; and vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

1/01.01 I <sup>strongly</sup> oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

2/04.01

3/07.01

Signed: *Kathryn S. Sawyer*

Address: *68 W. Ridge St. Oakland, CA 94612*

POSTAGE & FEES PAID  
LIVERMORE, CA 94550  
94550

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration

**Written Comment Form**  
*Must be received on or before May 27, 2004.*

1/03.01 My name is Gus Schleis. I'm 9 and I live in Berkeley. I'm in the 4<sup>th</sup> grade at Leconte Elementary. I don't like nuclear weapons. I think they're scary. I also think they're a waste of money. Why isn't there enough money for my school but billions for nuclear weapons? There are schools closing in Livermore where's the money? I think it's in the bombs. I think nuclear weapons are scary. I like the idea of fresh non-polluted snow to play in, but I don't like the idea of being in a nuclear winter with it raining ashes. I want a future not nuclear winter. I live within

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

(over)

Schleis, Gus  
Page 2 of 2

Schneider, Dr. David  
Page 1 of 1

he fallout zone if there's an accident at Livermore.

F also have a cousin who works on the laser in the labs. And, this report says there will now be plutonium where he works.

If it's not plutonium, it might be anthrax, or the plague. If they now have biological weapons at the lab, I'm worried about my cousin. I'm worried about me.

In the Bible Jesus says "Blessed are the peacemakers they will see the kingdom of God." It doesn't say "Blessed are the war makers."

2/35.01

5/05



Dr. David Schneider  
OPTOMETRIST  
(510) 848-0155 • dschneid@earthlink.net  
1336 HEARST AVENUE • BERKELEY, CA 94703

DEAR MANAGER Tom Grim

### Lawrence Livermore Lab needs to rethink expansion

The Department of Energy's Lawrence Livermore National Laboratory has proposed new projects that would double the plutonium-storage limit at the site and that could threaten rare ecosystems, including endangered plants and animals.

The Laboratory's draft Site-Wide Environmental Impact Statement (SWEIS), released in February, calls for major expansion at the 7,000-acre Site 300, which contains rich biological diversity, including one of the largest remaining native grasslands in California. The proposal includes construction of the Energetic Materials Processing Center, a 40,000-square-foot high-explosives processing facility with three magazines capable of storing up to 3,000 pounds of high explosives. Site 300 is Livermore Lab's high-explosive testing range near Tracy.

The Energetic Materials Processing Center would be constructed in red-legged frog habitat. One of the areas that is proposed to mitigate loss of the frog's breeding habitat has been detected with low levels of tritium (radioactive hydrogen).

In addition to major new construction projects, "continuing operations" at Site 300 threaten 24 species of birds that are listed as species of special concern. The explosives testing that occurs on a routine basis could possibly affect the golden eagle, prairie falcon, northern harrier, black-shouldered kite, ferruginous hawk, and red-tailed hawk.

Such diurnal raptors that forage directly over the facilities are vulnerable to flying debris and shock overpressure.

Another project that could wreak major environmental havoc is the plan to double the plutonium limit to 3,300 pounds at Livermore Lab's main site. No method currently exists to dispose of much of this highly-toxic radioactive element. In fact, the primary reason for the increase is that the Lab is close to its current limit of 1,540 pounds, but has no way to dispose of its stock. In 1992 the Lab planned to reduce its on-site plutonium to 440 pounds, but other Department of Energy facilities would not take the plutonium that the Lab had intended to send away. If more plutonium is brought in, we can only expect it to remain indefinitely, with no plan or means for ultimate disposal.

One of the new dangerous projects that uses plutonium at Livermore Lab is the Plutonium Atomic Vapor Laser Isotope Separation project. The Lab proposes to vaporize plutonium and then shoot laser beams through it to separate isotopes. To do this, the Lab plans to triple the allowable amount of plutonium "at risk" in a single room from 44 pounds to 132 pounds. By making plutonium airborne, the project would dramatically increase the risk of release, exposure, and accident.

Another proposed plutonium project would create a mini-chamber where plutonium would be fissioned and exploded in the National Ignition Facility mega-laser. After just one experiment, this chamber would be shipped to the Nevada Test Site and buried as radioactive waste. When NIF was initially proposed, it did not include plutonium experiments, in part due to the hazards to workers and the environment.

Sincerely,  
  
Dr. David Schneider  
1336 HEARST AVENUE  
BERKELEY, CA 94703

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

Schwartz, Ph.D., Elaine G.  
Page 1 of 2

Schwartz, Ph.D., Elaine G.  
Page 2 of 2

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

**From:** Elaine & Daniel Schwartz [mailto:delschwartz@juno.com]  
**Sent:** Friday, May 07, 2004 12:01 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:** Expanded Nuclear activity planned for Lawrence Livermore Labs in Livermore, California

Dear Mr. Grim,

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01 | I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02 | 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01, 33.01 | 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01, 26.03 | 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for

4/26.01, 26.03 | a close out of the NIF project and termination of plans to use plutonium and other new materials in it.  
 cont.

5/37.01 | 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

6/39.01 | 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

7/35.01 | 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Name: Elaine G. Schwartz, Ph.D.

Address: 224 Ocean View Ave.  
 Santa Cruz 95062

State: California

Seitz, Ann  
Page 1 of 3

Seitz, Ann  
Page 2 of 3

ann seitz  
22103 main street  
hayward, ca 94541

May 27, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

I hope you are not keeping my letter from your superiors really in charge of extending this genuine outcry from the public regarding all the comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL). It seems as though a cut off of dialogue or comments is the DOE's attempt to cut of democratic debate or any public input, yet it is the public who is effected by all these horrid plans.

1/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01, 33.01 | 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01, 26.03 | 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

5/37.01 | 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

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Seitz, Ann  
Page 3 of 3

Shaw, Laura  
Page 1 of 2

7/35.01  
CONT. weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Ann Seitz

Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration

**Written Comment Form**  
Must be received on or before May 27, 2004.

1/14.01 California is an unpredictable state. We have earthquakes every 40 minutes. It's not unpredictable people. Not the Lawrence Livermore lab, and then south of us, the Bunker. As the Loma Prieta and Northridge earthquakes and you don't have to be directly on a fault to feel an earthquake. Super unpredictable is the first reason that we should not have domestic nuclear fuel here. Considering the size of the lab, the soil and water table, without an amount of earthquake resistance we guarantee to protect the total facility.

2/25.10 We have really big faults -- you know you go to and for the past -- for many people. I think many people in the greater earth have even to subject them to a possible fault. Consider making nuclear or biological materials being transported at our unpredictable times.

Finally, we have people, life and lots of unpredictable.

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-0234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

Shaw, Laura  
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Sieck, Daryl  
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3/30.02

people. As the article in today's San Jose Mercury News states: "Amid growing concern that nuclear weapons labs are vulnerable to a terrorist attack, senior Energy Department officials are seriously considering major steps to improve security — including the removal of plutonium and highly enriched uranium from Lawrence Livermore National Laboratory and other weapons sites" (page two bottom)

1/14.01  
cont.

Now is not the time to consider adding any more extremely high risk materials to an already unpredictable and dubious state of security at the research facility. The environmental hazards of this new build up of nuclear materials at this facility are huge and unacceptable to the unpredictable Bay Area.

DARYL SIECK  
1307 HARMON ST  
BERKELEY, CA 94702

May 22, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Sincerely,

DARYL SIECK

Sierra Club, Tri-Valley Regional Group, Donna Cabanne  
Page 1 of 3



**SIERRA CLUB**  
FOUNDED 1892

**Tri-Valley Regional Group**  
(Serving Pleasanton, Livermore, Dublin and Sunol)  
c/o 3858 Mohr Avenue, Pleasanton, California  
94588

April 27, 2004

Mr. Tom Grim  
Department of Energy  
NNSA  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/04.01 The Sierra Club is vehemently opposed to the ten-year operations plan for Livermore Laboratories. The plan is dangerous and unnecessary: it will continuously put our health, our environment, our agriculture, and our community at intolerable levels of risks for years to come. The plan is simply unacceptable.

2/18.02 Let's start with dangers from Tritium. The lab claims tritium releases have declined in the last 10 years. If that is true, why do Livermore ground water wells show higher than normal amounts of tritium? Livermore is part of a closed water basin; we depend on our deep wells for water. What are the current levels of tritium in the water aquifers and in ALL the deep wells situated in the Livermore Valley? Were wells in the greater community tested or monitored for tritium levels? When was the last testing? And how frequently were wells located away from the lab tested? Were all significant sources of water tested for tritium regardless of distance from the lab? Have known plumes tested

3/16.01 higher or lower for tritium levels? Is it true that tritium levels in Livermore wines are three times higher than those of European wines? Is it true that because of these tritium levels, Livermore wines are difficult to sell in Europe because the wines fail to meet

Sierra Club, Tri-Valley Regional Group, Donna Cabanne  
Page 2 of 3

3/16.01 cont. minimal European health standards? Europeans don't have to drink wine with high tritium levels, but we have to drink Livermore water. Instead of putting more tritium

4/24.01 at the Livermore lab, we urge the lab to use their scientific experts to help us clean up the tritium tainted soil and water that already exists in this valley.

5/08.02 Increasing the plutonium at the lab to 3,300 pounds is absurd and dangerous. Instead of adding plutonium, the DOE should be removing ALL existing plutonium to a more secure site that is not surrounded by a city of over 75, 000 people. The real dangers posed by theft or terrorists are insurmountable. Livermore lacks the high security protections other sites have, which makes Livermore an easy target for groups bent on destruction.

6/30.02, 08.02 Before September 11<sup>th</sup>, no one thought a plane could be used as weapon; let's not ignore the risks that exist with wishful thinking or hid behind so called "effective" ratings. We all know there have been serious breaches of security at the Livermore lab, This is simply not the facility to keep even EXISTING plutonium...Consolidate the plutonium at another site for the safety of the nation as well as the safety and the environment of this community.

7/17.04, 25.05 Finally, please consider that Livermore has the dirtiest air in the Bay Area and despite efforts to clean it up we were ranked as the 8<sup>th</sup> dirtiest air basin in the nation. Our children and elderly suffer from significantly high asthma rates. We don't need more accidental releases in to the air, not matter how small the lab claims these releases are. Just what are the current rates of asthma in children in Livermore? Are more cases of asthma in children detected closer to the lab? Do Livermore children have more lung

Sierra Club, Tri-Valley Regional Group, Donna Cabanne  
Page 3 of 3

Siino, Sabrina  
Page 1 of 1

7/17.04,  
25.05  
cont.

problems/ diseases than children in communities without labs?

Without answers to these pressing safety , health and environmental issues, it would be unreasonable to move forward with this plan.

We are not interested in fat documents or EIRs that may try to whitewash the inherent dangers of housing even more plutonium or tritium at the Livermore Lab.

1/04.01  
cont.

Speaking on behalf of the Sierra Club, as a teacher, and a resident of Livermore for 24 years , I urge you...

Don't waste taxpayers' money on continuing to study a site that cannot be adequately secured from the real threat of terrorism...The stakes are too high; move these bomb making materials out of the area and consider alternative research at the Livermore Lab.

Sincerely,  
*Donna Cabanne*  
Donna Cabanne  
Sierra Club

1/04.01

I am writing to express my disagreement with the proposal to expand nuclear weapons work at the Livermore Lab, not only am I against any nuclear weapons expansion, but I feel that this location which is already a superfund site, and so near to a metropolitan area, is not suitable.

Sincerely,  
Sabrina Siino

Siskind, Erica  
Page 1 of 1

Siskind, Erica  
Page 1 of 1

Dear DOE:

Here is my comment on the draft Site Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF mega-laser; and vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

1/01.01 I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

2/04.01

3/07.01

Signed: S. Erica Siskind  
1427 PARKER ST.  
Livermore, CA 94550

NO EXPANSION OF NUCLEAR WEAPONS PROGRAMS. CONVERT TO PEACE.

RECEIVED MAY 03 2004  
Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

9/27/04  
L-293  
GREETINGS  
23

Dear Mr. Grim, 9/19/04

I do not want weapons of mass destruction to be developed and produced anywhere - but certainly not in Livermore.

Plutonium should be banned as dangerous and unnecessary.

The hazardous plans for "Plutonium Atomic Vapor Laser Isotope Separation" and the "Modern Pit Facility" and the "Neutron Ignition Facility" should be canceled. As should plans for any "Brightfield Fusion Enrichment" Please do not put my

MR TOM GRIM  
D.O.E. NNSA, L-293  
7000 EAST AVE.  
LIVERMORE, CA 94550

1/02.01

2/04.01

Snake River Alliance, Jeremy M. Maxand, Executive Director  
Page 1 of 6

Snake River Alliance, Jeremy M. Maxand, Executive Director  
Page 2 of 6

Mr.,

Please find attached our comments on the Lawrence Livermore National Laboratory Site-wide Environmental Impact Statement.

Jeremy M. Maxand  
Executive Director  
Snake River Alliance  
104 S Capitol Blvd  
Boise, Idaho 83702  
(208) 344-9161 voice  
(208) 331-0885 fax  
sra@snakeriveralliance.org  
snakeriveralliance.org

"[Senator Graham's high-level waste] legislation would be a huge step backward, reinforcing public fears about our nation walking away from nuclear cleanup obligations." (Idaho Governor Dirk Kempthorne, May 13, 2004)



snake river alliance

IDAHO'S NUCLEAR WATCHDOG

May 20, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234  
Fax: (925) 422-1776  
Email: tom.grim@oak.doe.gov

**RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).**

Dear Mr. Grim:

The Snake River Alliance is an Idaho-based grassroots group working through research, education, and community advocacy for peace and justice, the end to nuclear weapons production activities, and responsible solutions to nuclear waste and contamination. I submit the following comments and questions on behalf of our dues-paying members.

1/31.04 | Through this letter we are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

2/08.02 | 1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear

Snake River Alliance, Jeremy M. Maxand, Executive Director  
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materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2/08.02 cont. 2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

3/34.01 3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

4/33.01, 25.01 4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

5/27.01

104 S Capitol Blvd PO Box 1731 Boise, Idaho 83701 (208) 344-9161 voice (208) 344-9161 fax	411 E 6 <sup>th</sup> Street/ERC PO Box 4090 Ketchum, Idaho 83340 (208) 726-7271 voice (208) 726-7271 fax	310 E Center Street Pocatello, Idaho 83201 (208) 234-4762 voice (208) 232-4922 fax
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Snake River Alliance, Jeremy M. Maxand, Executive Director  
Page 4 of 6

Page 3

6/37.01 5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

7/26.01, 8/26.03 6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.

9/26.04 7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations.

10/39.01 Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.

8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.

104 S Capitol Blvd PO Box 1731 Boise, Idaho 83701 (208) 344-9161 voice (208) 344-9161 fax	411 E 6 <sup>th</sup> Street/ERC PO Box 4090 Ketchum, Idaho 83340 (208) 726-7271 voice (208) 726-7271 fax	310 E Center Street Pocatello, Idaho 83201 (208) 234-4762 voice (208) 232-4922 fax
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**Snake River Alliance, Jeremy M. Maxand, Executive Director**  
**Page 5 of 6**

Page 4

11/35.01 | 9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.

12/14.01 | 10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.

13/22.01 | 11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.

14/20.05 | 12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.

15/01.01 | 13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).

16/07.01 | Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.

104 S Capitol Blvd PO Box 1731 Boise, Idaho 83701 (208) 344-9161 voice (208) 344-9161 fax	411 E 6 <sup>th</sup> Street/ERC PO Box 4090 Ketchum, Idaho 83340 (208) 726-7271 voice (208) 726-7271 fax	310 E Center Street Pocatello, Idaho 83201 (208) 234-4762 voice (208) 232-4922 fax
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**Snake River Alliance, Jeremy M. Maxand, Executive Director**  
**Page 6 of 6**

Page 5

The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.

Sincerely,



Jeremy M. Maxand  
 Executive Director

104 S Capitol Blvd PO Box 1731 Boise, Idaho 83701 (208) 344-9161 voice (208) 344-9161 fax	411 E 6 <sup>th</sup> Street/ERC PO Box 4090 Ketchum, Idaho 83340 (208) 726-7271 voice (208) 726-7271 fax	310 E Center Street Pocatello, Idaho 83201 (208) 234-4762 voice (208) 232-4922 fax
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Soske, Julie  
Page 1 of 2

Soske, Julie  
Page 2 of 2

Julie Soske  
106 Shady Ln.  
Ojai, Ca 93023

May 24, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/04.01 I am writing you because I am very concerned about the new programs that are being considered for implementation at the Livermore Labs in Northern California. The following are some of my concerns:

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

1. Storage of More Nuclear Materials: The plan calls for more than doubling the waste already stored.

2/27.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): There is a reason why a similar project was cancelled ten years ago. It is dangerous.

3/26.01 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser:

4/37.01 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

5/39.01 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This is not the direction we need to go.

6/35.01 6.: This plan mixes chemical warfare substances and bombs at Livermore Lab.

I am concerned for the health and welfare for our planet.

7/07.01 Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Julie Soske

Spann, Mark  
Page 1 of 3

Spann, Mark  
Page 2 of 3

Mark Spann  
4714 Ballard ave NW #320  
Seattle, WA 98107

May 31, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Dear Mr. Grim

To you the future must look grim, so "why not just do whatever maximizes prophets". Right? Well to a lot of people the future looks like a bridge, which spans the distance between all peoples needs. If we as individuals stand for what we know in our hearts to be right, we help build bridges which span the gaps between present conditions and people's needs. Please be a hero and do what you know in your heart to be right!

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01  
33.01

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01  
26.03

3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

5/37.01

4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

6/39.01

5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

7/35.01

6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

Spann, Mark  
Page 3 of 3

Sroufer, Becky  
Page 1 of 1

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Mark Spann

Dear DOE:

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility"; fissioning plutonium in the NIF mega-laser; and vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

1/01.01 | I oppose these actions in the SWEIS that will increase nuclear proliferation and damage our environment. I call on you to analyze conversion of the Lab to peaceful purposes as an alternative.

2/04.01

3/07.01

Signed: *Becky Sroufer*

Address: *2211 12th St  
Sacramento CA 95812*

NO MORE WEAPONS OF MASS DESTRUCTION!

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA  
94550

Stanislawsky, Ann  
Page 1 of 1

State of California, Terry Roberts, Director, State Clearinghouse  
Page 1 of 2

Dear DOE:

Here is my comment on the draft Site-Wide Environmental Impact Statement on Livermore Lab operations over the next ten years. The SWEIS calls for major increases in nuclear weapons design and manufacture. New plutonium activities include: raising the inventory from 1,540 pounds to 3,300 pounds; tripling the amount "at risk" at one time; creating prototype bomb cores for a new "Modern Pit Facility;" fissioning plutonium in the NIF mega-laser; and, vaporizing plutonium oxide on-site to separate isotopes. The SWEIS also reveals plans to increase the "at risk" limit for radioactive tritium 10-fold.

*Please implement my wishes  
I oppose these actions in the SWEIS that will  
increase nuclear proliferation and damage our  
environment. I call on you to analyze conversion  
of the Lab to peaceful purposes as an alternative.*

1/01.01  
2/04.01  
3/07.01

Signed: *Ann L. Stanislawsky*  
117 Coos Ave.  
Address: *San Francisco, CA 94565*

**To:**

**Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550**





STATE OF CALIFORNIA  
Governor's Office of Planning and Research  
State Clearinghouse and Planning Unit

Arnold Schwarzenegger  
Governor

May 28, 2004

Tom Grim  
U.S. Department of Energy  
7000 East Ave., MS-L-293  
Livermore, CA 94550

Subject: Continued Operation of Lawrence Livermore National Laboratory & Supplemental Stockpile Stewardship & Management  
SCH#: 2004024001

Dear Tom Grim:

The State Clearinghouse submitted the above named Draft EIS to selected state agencies for review. The review period closed on May 27, 2004, 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,  
*Terry Roberts*  
Terry Roberts  
Director, State Clearinghouse



1400 TENTH STREET, P.O. BOX 3044, SACRAMENTO, CALIFORNIA 95812-3044  
TEL (916) 445-0613 FAX (916) 325-3018 www.opr.ca.gov

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

**Document Details Report  
State Clearinghouse Data Base**

**SCH#** 2004024001  
**Project Title** Continued Operation of Lawrence Livermore National Laboratory & Supplemental Stockpile  
**Lead Agency** Stewardship & Management  
 U.S. Department of Energy

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**Type** EIS Draft EIS

**Description** LLNL consists of two sites: an 821-acre site in Livermore, California (Livermore Site); and a 7,000-acre experimental test site near Tracy, California (Site 300). Most LLNL operations are located at the Livermore Site. LLNL also conducts limited activities at several leased properties near the Livermore Site.

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**Lead Agency Contact**  
**Name** Tom Grim  
**Agency** U.S. Department of Energy  
**Phone** 925-422-0704 **Fax**  
**email**  
**Address** 7000 East Ave., MS-L-293  
**City** Livermore **State** CA **Zip** 94550

---

**Project Location**  
**County** Alameda, San Joaquin  
**City** Livermore  
**Region**  
**Cross Streets** East Ave. and Greenville Rd  
**Parcel No.**  
**Township** **Range** **Section** **Base**

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**Proximity to:**  
**Highways** I-580  
**Airports**  
**Railways** Union Pacific  
**Waterways** South Bay Aqueduct  
**Schools**  
**Land Use** MP - Industrial Park

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**Project Issues:** Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic/Historic; Cumulative Effects; Economics/Jobs; Fiscal Impacts; Flood Plain/Flooding; Geologic/Seismic; Landuse; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Other Issues; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife

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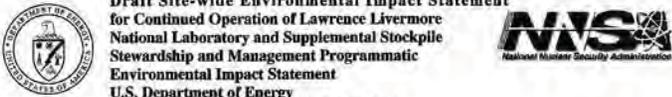
**Reviewing Agencies:** Resources Agency; Department of Fish and Game, Region 2; Department of Fish and Game, Region 3; Department of Conservation; Integrated Waste Management Board; Regional Water Quality Control Board, Region 2; Regional Water Quality Control Bd., Region 5 (Sacramento); Department of Toxic Substances Control; Office of Historic Preservation; Department of Parks and Recreation; Caltrans, District 4; Caltrans, District 10; Department of Health Services; California Energy Commission; Native American Heritage Commission

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**Date Received** 02/27/2004 **Start of Review** 02/27/2004 **End of Review** 05/27/2004

Note: Blanks in data fields result from insufficient information provided by lead agency.

**Draft Site-wide Environmental Impact Statement  
for Continued Operation of Lawrence Livermore  
National Laboratory and Supplemental Stockpile  
Stewardship and Management Programmatic  
Environmental Impact Statement  
U.S. Department of Energy  
National Nuclear Security Administration**



**Written Comment Form**  
Must be received on or before May 27, 2004.

1/33.01 Not only is increased plutonium  
not necessary for our national defense,  
it is also extremely expensive & poses  
2/23.01 a serious safety risk to the safety  
of people in the densely populated San Francisco  
Bay area.

- Andrea Sterner  
13220 Yates Ford Rd  
Clifton, VA 20124

Please use other side if more space is needed.

Comment forms may be mailed to:  
Mr. Tom Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

Comment forms may be faxed to:  
Mr. Tom Grim  
(925) 422-1776

Stevenson, Bill and Maria  
Page 1 of 1

Stevenson, Martin  
Page 1 of 1

1515 Shasta Drive, #1325  
Davis, CA 95616  
April 26, 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

Dear Mr. Grim:

Our government has been concerned about weapons of mass destruction being harbored by such "rogue" nations as Iraq, Iran and N. Korea. We are equally disturbed by the huge stockpile right in our own backyard.

More than a decade after the end of the Cold War, our government is considering doubling plutonium work at Lawrence Livermore National Lab and working with almost ten times the radioactive tritium it does now. If that happens, Livermore could become the world's 6<sup>th</sup> largest nuclear power, matching France's arrival—a boost that shocks proponents of nuclear disarmament.

The DOE is draft site-wide Environmental Impact Statement on Livermore Lab's planned operations for the next 10 years. A project cancelled more than 10 years ago because it was dangerous and unnecessary. The plan will add plutonium, highly enriched uranium and lithium hydride to experiments in the National Ignition Facility megabaser when it is completed, making the NIF more hazardous to workers and environment and a nuclear proliferation nightmare. The plan also seeks to ready the nation to conduct full-scale underground nuclear tests—a dangerous return to unrestrained nuclear tests.

It is immoral to use our technological expertise to produce new nuclear weapons and bio-warfare agents that can kill innocent people as well as terrorists. We help spread terrorism, fear and hatred by providing terrorists with the means and motives to retaliate. Let's work toward international disarmament.

Sincerely,  
Bill & Maria Stevenson

1/01.03

2/04.01

3/01.01

Martin Stevenson  
845 Norma Way  
Santa Barbara, CA 93111

May 20, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

1/04.01

I am writing in opposition to the proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

2/01.01

Aside from questions as to the military necessity or usefulness of these weapons, their ultimate effect can only be to increase our danger. As has often been demonstrated, whatever technological marvels the United States can accomplish will be duplicated by other countries. When we develop awesomely dangerous weapons we gain only a short term advantage. Others soon learn how to make them and they end up increasing the serious dangers we already face from nuclear proliferation.

3/07.01

There is another compelling reason for not resuming nuclear weapons development and testing. Just by doing so we immediately become less secure because we undermine the critical international effort to control nuclear proliferation.

Developing these weapons is not only a waste of our resources. It is a BAD IDEA, making us less -- not more -- secure. Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Martin Stevenson

**Stocking, Dale E.**

Page 1 of 1

Dear Mr. Grim:

1/31.02 | Due to an increased amount of radioactive material that will be shipped to the site through and around Tracy/San Joaquin County and increasing urban encroachment on the site, I request that the comment period for the Draft LLNL SW/SPEIS be extended.

Thank you.

Dale E. Stocking  
808 Bristol Avenue  
Stockton, CA 95204  
[dalehiker@comcast.net](mailto:dalehiker@comcast.net)

**Stone, Richard E.**

Page 1 of 1

SIRS:

1/33.01 | Please give your attention to the referenced article. The NNSA staff is attempting to turn a research facility (LLNL) into a production facility, and those proposing this don't know a glovebox from a breadbox. They are seriously increasing CRITICALITY hazards and radiation hazards to everyone in the surrounding area. I am in favor of nuclear power, and in favor of waste storage at the Yucca Mtn. site in Nevada, but I am strongly opposed to tripling (from 20Kg to 60Kg) of Pu in any lab room in Bldg 332, the Plutonium facility. If anything, the Laboratory should greatly reduce its Pu inventory. I am a retired chemist with 35 years experience in the nuclear industry, 26 years at LLNL.  
Sincerely, Richard E. Stone  
Please see: <[www.trivalleycares.org/SWEISletter.asp](http://www.trivalleycares.org/SWEISletter.asp)>

Strauss, Peter M.  
Page 1 of 6

**Comment of Peter M. Strauss**  
April 27, 2004

1. My name is Peter Strauss, President of PM Strauss & Associates. My office is located in San Francisco at 317 Runledge St. I've been a technical advisor to Tri-Valley CAREs since the early 1990's. Most of my work focuses on the cleanup of the main site and Site 300. However, I have done independent analyses of plutonium use at the Lab, the Uranium Atomic Vapor Laser Isotope System, and the Biosafety Level 3 Laboratory. TVC has requested that I review this Site Wide Environmental Impact Statement (SWEIS).
2. For the purpose of saving time, I'm going to concentrate on two subjects: the accident analysis contained in the SWEIS and ramifications for Site 300. Tri-Valley CAREs will be submitting more comprehensive comments later on.

**Accident Analysis**

1/25.06 | 3. I have concluded that the accident analysis is deficient, and would considerably underestimate the consequences of a major accident. It should be noted that historically, the Defense Nuclear Facilities Safety Board (DNFSB) has criticized LLNL operations, particularly (but not exclusively) regarding the plutonium facility (Building 332). Most recently the DNFSB strongly criticized LLNL's accident analysis. Attached to this document are some excerpts from Staff Issue Reports. I note that as far back as 1995, the DNFSB required shutdown of plutonium Building after important safety measures were missed. This shutdown lasted for six months until a ventilation system and emergency generator were added. In a 1997 letter from the Defense Nuclear Facilities Safety Board, John Conway, its Chairman stated that the number of criticality infractions at B-332 "raise questions as to whether DOE-OAK is staffed with the technical capabilities necessary to provide guidance" and "neither DOE-OAK nor LLNL management appears to recognize or fully appreciate all of the problems of hazardous work control" (Letter from John T. Conway, Chairman of DNFSB to Federico Pena, Secretary of Energy, December 31, 1997). \*

2/25.07 |

3/25.08 | 4. The airplane crash scenario assumes that only a small single engine aircraft would be involved in an accident. The analysis only included airfields within 22 miles, thereby excluding commercial jet liners originating from San Jose, Oakland, San Francisco International Airport, Sacramento, and military aircraft originating from Moffett Airfield. These airports are all within 50 miles of LLNL. The airplane accident scenario needs to be recalculated, assuming that a commercial airliner crashes into one of the buildings. Assuming a large plane crash may dominate bounding accident scenarios. \*

5. Under unfavorable meteorological conditions, the probability of an air crash would increase. This is not reflected in the accident scenarios

6. For different accident scenarios, the frequency of airplane crashes changes. Please provide an explanation.

Strauss, Peter M.  
Page 2 of 6

3/25.08 | 7. Derivation of accident frequencies, except for airplane crashes, are not cont. provided. \*

4/30.02 | 8. None of the intentional acts that could cause a release (e.g., terrorist attack, theft) are analyzed in this document. Instead, NNSA states that this is a separate analysis and is classified. While I understand that there is some need to classify some information regarding terrorist attacks and security, I am very concerned that security systems and personnel are not adequate to prevent intentional releases. The SWEIS needs more detail about the security force, its training, and what types of equipment are available to it. It also should discuss the range of scenarios that were analyzed, and provide a qualitative analysis. This method is recommended by the DOE Office of NEPA and Policy Compliance, Recommendations for Analyzing Accidents Under NEPA, Final Guidance, July 2002, Attachment 1.\*

5/25.07 | 9. In the bounding accident for B-332, (unfiltered room fire), certain assumptions are made such as the airborne release fraction (i.e., the amount that would disperse into the air as a result of this accident scenario) (ARF) is 0.00005 and the leak path factor (LPF) is 0.05. We believe that a more conservative approach is to assume the leak path factor is between 0.5 and 1, which would double the release. (In its 2004 letter to NNSA, the DNFSB also criticized the LPF calculation, noting that the "calculated LPF of 5 percent is unrealistic and probably underestimates the extent of a release from unfiltered radioactive material from this facility.") I also question how the ARF was derived. These variables are fundamental in deriving health effects, and each should be clearly stated for each accident, and all assumptions should be clearly stated.\*

6/25.01 | 10. The bounding accident scenario for B-332 is the unfiltered fire in one room, with a material at risk (MAR) of 60 kg of plutonium. However, the administrative levels allow 60 kg in each of two rooms. The detailed analysis of a plane crash does not provide the MAR, but we would think that it should be 120 kg of Pu, with a disturbance in two rooms. If this is correct, would the plane crash become the bounding scenario?

7/25.05 | 11. A hydrogen deflagration accident has nearly five times the source term as the unfiltered fire, and a greater estimated probability. This would point to it as being the bounding accident for B-332. Please conduct a detailed analysis of this scenario.

12. Facilities 331 and 332 have emergency diesel generators (EDGs) to provide power in the event of an interruption in power supply. During the 1990's, the EDGs at B-332 failed routine tests five times. The accident scenarios should not presume that the EDGs will be working, both to run the ventilation system and other emergency equipment. A credible scenario of an unfiltered fire with no power should be analyzed. \*

13. Only latent cancer fatalities are reported. If any of the accidents were to occur, there would be other severe effects that would result, including non-lethal cancers and a number of diseases. Because of the isotopes involved,

Strauss, Peter M.  
Page 3 of 6

7/25.05 cont.	(e.g., highly enriched uranium and plutonium) the residual risks of disease from an accident would last centuries. The accident analysis does not appear to consider this.*
8/25.06, 25.01	14. In addition to severe health effects, an accident could cause extensive economic and social disruption. For example, prime agricultural land may be restricted, and cleanup costs, both on-site and off-site would be substantial. For reference, the cleanup of Three Mile Island cost approximately \$1 billion. 15. HEPA filters are assumed to mitigate most accident scenario releases. However, during a fire, both the filter and the seal are prone to failure, as the filter is made of paper and would lose its filtering capability when wet (fire suppression) and would be severely damaged by high temperatures.
9/25.01	16. A fire in B-334 involving HEU is not analyzed in detail. Because 100 g are the source term, we recommend performing a detailed analysis of this accident scenario.
8/25.06, 25.01 cont.	17. The SWEIS fails to document and take account of environmental effects in its accident analysis. This is recommended by US DOE Office of NEPA Policy and Compliance, Recommendations for Analyzing Accidents Under NEPA, July 2002, p. 3.
10/25.04	18. Would increase in amount of Pu and material at risk have any additional concern with regards to the BSL-3 proposal? For example, if the worst case accident occurred at Building 332, please detail how hazardous materials or biological agents would be secured while personnel in other buildings were being evacuated. 19. Chlorine gas is stored on-site. A release could disable security forces and personnel, so that an accident could occur while hazardous materials are being used. Please explain how operations could be safely shutdown if there was a leak of chlorine gas and another disabling chemical stored on site. In addition, an analysis of an accident involving these substances is in order.
11/25.02	<u>Site 300</u>
12/17.07	1. For Site 300, it does not appear that a massive wildfire has been analyzed. This would be a fire that could not be controlled by the fire fighting force. This scenario has been brought to your attention in public comments on the Site 300 Site Wide Record of Decision.*
13/17.01	2. At Site 200 under no action, there is assumed release 194 Ci of tritium. There were no releases in 2001. We have been informed in other forums (i.e., remediation activities) that little or no tritium is planned. <u>Please explain this discrepancy.*</u> 3. At military bases all over the country, there is a demand that environmental laws and regulations be modified in order for the military to train and perform its mission. Demands are made that Endangered Species Act, noise controls, and the Clean Air Act be relaxed for military bases and that local zoning makes sure that the residents do not move too close to bases. This issue is

Strauss, Peter M.  
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14/09.03	called encroachment. At Site 300, Tracy hills development is planned approximately 2 miles from boundary. At the southern boundary there are ranches. With increased shots, tritium releases, DOE should address the issue of encroachment.
15/16.02	4. At Site 300, the wetland removal (termination of surface water discharge) would eliminate breeding ground and potential habitat for the red-legged frog, a federally protected species. With regards to wetlands, the PA Proposed termination of surface water releases for an artificial wetland at Building 865 would impact Red Legged frogs since it has been a known breeding location for 6 years. Termination of water to a small, artificially maintained wetland at Building 801 would eliminate a potential breeding site for this frog species, although no California red legged frogs occur at this site. Elimination of very small wetlands associated with the cooling towers at Buildings 851 and 827 would eliminate two low-quality habitat locations for the California red-legged frog where frogs have not been observed for the past 6 years. Proposed termination of surface releases at Buildings 865, 851, and 827 was coordinated with the USFWS and received approval contingent upon implementation of mitigation measures in a recent Biological Assessment and related Biological Opinion (Jones and Stokes 2001, USFWS 2002b). <u>Please provide document submitted to the USFWS.</u> 5. This proposed termination may start as early as 2004 (LLNL 2003ab). LLNL is proposing to mitigate the 0.62-acre artificial wetland removed by continued operations at Site 300 under the Proposed Action, by enhancing selected areas and increasing breeding opportunities for the California red-legged frog. A minimum of 1.86 acres of wetland habitat would be enhanced and managed for these two species. Mitigation sites for potential enhancement include the wetlands at the seep at the SHARP Facility and Mid Elk ravine. <u>Please identify, in Appendix F, all areas that would be affected.</u>
16/16.03	6. There are over thirty animal species and numerous plant species that are listed at least as species of concern, are listed in the migratory Bird Act, or the Endangered Species Act... The EIS fails to clearly state how operations will be managed to ensure that the habitat and breeding of these plants and animals is not disrupted.*
17/04.02	7. The proposed Energetic Materials Processing Center located at the Site 300 process area would include the construction of a new 40,000-square-foot processing facility and four magazines: two capable of storing 1,000 pounds of high explosives and two capable of storing 500 pounds of explosives (Section 3.3.8). <u>Please indicate what type of explosive material is anticipated.*</u>
18/18.01	8. Relating to the above question, the groundwater emanating from the current high explosives process area (Building 812) is contaminated with RDX, perchlorate, nitrate and TCE. Please explain how LLNL plans to manage waste disposal so that this will not occur again.
19/22.02	9. Table D 3.2.12 indicates that lithium hydride is stored at Site 300. Please indicate how much is stored and what it is used for.

Strauss, Peter M.  
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9. Table D.3.2.12 indicates that lithium hydride is stored at Site 300. Please indicate how much is stored and what it is used for.

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**Excerpts from Defense Nuclear Facilities Safety Board Letters and Staff Reports Concerning LLNL.**

- *April 11, 2002* – “The main issue outlined in the Board’s letter of December 21, 1999, to DOE was the vulnerability of the Building 332 EPS to singlepoint failures that would trigger the subsequent loss of one or more of the four separate downstream safety-class systems requiring emergency power. The staff observed that single-point failures still exist in the present EPS, including the example explicitly cited in the Board’s previous letter. Furthermore, it appeared that the laboratory has made few tangible attempts to remedy system vulnerabilities associated with single-point failures.”
- “**Conclusion.** The staff observed at LLNL a fundamental lack of understanding of system vulnerabilities in the Building 332 EPS.”
- *March 25, 2003* “*Building 332*—The Board’s staff reviewed the current facility SAR and Technical Safety Requirements (TSRs), dated August 2002, and noted a number of inadequacies and weaknesses. These inadequacies included postulated accident scenarios for which unmitigated consequences had been evaluated to exceed the off-site evaluation guidelines, but for which no safety-class controls had been identified. ... The following specific examples illustrate the issues identified by the staff:
    - ! The hazard analysis for the unmitigated rupture and subsequent fire of a waste drum containing transuranic waste had resulted in consequence estimates that exceeded the off-site evaluation guidelines by a factor of 20. However, no safety-class or safety significant controls had been identified for this scenario.
    - ! The fire suppression system for Building 332 had been functionally classified as safety class. Water essential for the operation of this system was being provided by a combination of off-site sources that are not under direct LLNL control and an emergency water source housed in the facility basement. Given the critical importance of preventing the development of fire-related accident sequences in this facility, it did not appear that all reasonable steps had been taken to understand, justify, and ensure the adequacy, in terms of reliability and availability, of the Building 332 fire suppression water supply. In particular, the boundaries of this safety-class system are not well defined in current safety basis documentation. Furthermore, the compressed air system that is necessary to provide the motive force for the emergency water source had not been functionally classified with respect to this important safety function. The compressed air system also supported other safety-related features at the facility.
    - ! The fire analysis had not developed an appropriate unmitigated analysis for a postulated fire in a certain area of Building 332

**Sultar, Joanne**  
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**Sumrall, Amber Coverdale**  
**Page 1 of 3**

Joanne Sultar  
 2911 Deakin St  
 Berkeley, CA 94705

May 18, 2004

Mr. Tom Grim  
 DOE, NNSA L-293  
 7000 East Ave.  
 Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

2/03.01

We don't need more nukes - we need to put our money where people's basic needs are served (housing and health, food and education). I oppose any increase in defense budgeting.

Sincerely,

Joanne Sultar

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

From: Amber Coverdale Sumrall [mailto:ambers@sasquatch.com]  
 Sent: Wednesday, May 12, 2004 11:28 AM  
 To: tom.grim@oak.doe.gov  
 Subject: Livermore Expansion

Dear Mr Grim:

1/01.01

The proposed expansion at Livermore is frightening and truly hard to believe at this juncture in history - it is time for this nation to take responsibility for stopping the proliferation of weapons of all kinds, and especially WMD, and for beginning a true path of disarmament

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

2/02.01

I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

3/08.02

1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

4/27.01,

33.01

2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

5/26.01,

26.03

3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at

Sumrall, Amber Coverdale  
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5/26.01, 26.03 cont.	Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.
6/37.01	4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.
7/39.01	5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to 'enhance' the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to 'enhance' U.S. readiness to conduct full-scale tests.
8/35.01	6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's 'no action alternative' as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a 'stay' prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.
9/04.01	I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

Sumrall, Amber Coverdale  
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10/07.01	Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a 'green lab' in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.
	Sincerely, Amber Coverdale Sumrall 841 Laurel Glen Rd Soquel, CA 95073 (831) 477-4375

Sutton, Patrice, M.P.H.  
Page 1 of 4

May 26, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Via Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's (DOE) Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

I am a public health professional deeply concerned with the local, national, and global health risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. I strongly oppose DOE's proposed plans. Below, I have outlined a number of specific concerns that, taken cumulatively, lead me to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. My specific concerns are:

1/04.01

2/31.04

3/08.02

- It is imperative that the DOE evaluate an alternative that would remove all special nuclear materials from LLNL. This is a reasonable option and a foreseeable outcome within the next decade at LLNL. I have spent the past two decades addressing the public health legacy of the DOE's nuclear weapons program. This legacy has been characterized by Bernard Lown, MD, Co-Founder of the Nobel-Peace Prize winning organization, International Physicians for the Prevention of Nuclear War as "a kind of secret, low-intensity radioactive warfare [that] has been waged against unsuspecting populations ..." The public health legacy of LLNL's operations have not been addressed by even the most minimal standards. Locally, LLNL's operations have left a potentially wide-swath of plutonium-contaminated sludge throughout the area. Yet even simple matters such as DOE providing funding for unsuspecting residents to identify and remedy the problem languish or are otherwise repudiated by DOE. Nationally, LLNL served a critical research and development role for nuclear weapons production. By DOE's own estimates, it will take billions of dollars over many decades to "clean-up" the environmental consequences of these DOE activities. Even if all due diligence is applied to these issues, the National Research Council has stated that radioactive and toxic contamination will remain long into the future. Globally, the U.S.' continued commitment to the development of nuclear weapons, as exemplified in the LLNL SWEIS, fuels the proliferation of nuclear weapons by other state and non-state

4/23.01

5/01.01

Sutton, Patrice, M.P.H.  
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actors. Therefore, I find the DOE's plans to increase the environmental burden of highly toxic materials in the service of planetary annihilation to be outrageous.

6/08.02

\* Under its proposed plan, DOE will more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. The DOE should de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than increase them.

7/34.01

8/33.01,

25.01

\* The DOE proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The DOE proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. It is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

9/37.01

\* The DOE's plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. DOE should halt all work on plutonium pit production technologies at Livermore Lab.

10/26.01, \*

26.03

\* The DOE's plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser

Sutton, Patrice, M.P.H.

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10/26.01,  
26.03  
cont.

when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. The DOE should cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.

11/26.04

\* The DOE's SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. The DOE should cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, the NIF megalaser should be cancelled. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.

12/39.01

\* The DOE's plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.

13/35.01

\* The DOE's plan calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. These activities will undermine international efforts to prevent the proliferation of biological weapons such as under the Biological Weapons Convention. The DOE's plans also pose a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.

Sutton, Patrice, M.P.H.

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14/22.01

\* A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. No waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.

15/20.05

16/01.01

\* The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the obligations of the U.S. under Article XI of the Nuclear Non-Proliferation Treaty to proceed with efforts that lead to the global abolition of nuclear weapons. A revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty.

Sincerely,

Patrice Sutton, M.P.H.  
311 Douglass Street  
San Francisco, CA 94114

CC:

Senator Dianne Feinstein  
Room 331, Senate Hart Office Bldg.  
Washington, DC 20510  
michele\_senders@feinstein.senate.gov

Senator Barbara Boxer  
Room 112, Senate Hart Office Bldg.  
Washington, DC 20510  
jennifer\_tang@boxer.senate.gov

**Taxpayers for Common Sense, Austin Clemens, Research Analyst**  
**Page 1 of 2**

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

**From:** Austin Clemens [mailto:austin@taxpayer.net]  
**Sent:** Wednesday, May 26, 2004 12:56 PM  
**To:** tom.grim@oak.doe.gov  
**Subject:**

Dear Mr. Grim:

I have attached to this email Taxpayers for Common Sense's comments on the Lawrence Livermore National Laboratory draft site-wide environmental impact statement. The comments are in PDF format.

Thanks,

Austin Clemens  
 Research Analyst  
 Taxpayers for Common Sense  
 651 Pennsylvania Ave., SE  
 Washington, DC 20003  
 Phone: (202) 546-8500 x106  
 Fax: (202) 546-8511  
 email: [austin@taxpayer.net](mailto:austin@taxpayer.net)  
<http://www.taxpayer.net>

**Taxpayers for Common Sense, Austin Clemens, Research Analyst**  
**Page 2 of 2**



Thomas Grim, Document Manager  
 National Nuclear Security Administration  
 Department of Energy  
 Livermore Site Office, L-293  
 7000 East Avenue,  
 Livermore, CA 94550-9234

Dear Mr. Grim:

With this letter, Taxpayers for Common Sense (TCS), a non-partisan budget watchdog group, submits our comments regarding the LLNL DSWEIS. TCS strongly recommends that the Department of Energy (DOE) remove from its proposed action for Lawrence Livermore National Laboratory any programs that contribute to the design and planning of a Modern Pit Facility (MPF).

The National Nuclear Security Administration (NNSA) has failed to demonstrate a need for the MPF. Of particular concern is the question of how long plutonium pits last - a question that the NNSA has not answered. The NNSA continues to study the issue, but will not release its study until 2006. Preliminary results state that pits last 45-60 years at a minimum, and respected physicist Dr. Richard Garwin, who has extensive experience with weapons design, has estimated that pits might last as long as 90 years. Our current pits are just 20 years old on average. Unless we are looking at an absolute worst-case scenario, a MPF would be decades premature. Even in such a worst-case situation, pits could be produced at Los Alamos Labs, which could be refitted to produce up to 150 pits per year, at significant savings. Given the \$2-4 billion cost of such a facility, American taxpayers should be concerned about this potentially wasteful project.

Congress has rightly recognized the problem and cut funds for the MPF's design. The NNSA, citing congressional concern, has delayed siting of the facility. Concern over the construction of the facility is widespread, and unites both fiscal conservatives and arms control advocates in Congress. Until the NNSA has proven to Congress and taxpayers that the enormous cost of a MPF is justified, we should not spend taxpayer dollars on planning and designing the facility.

According to the Lawrence Livermore DSWEIS, one upcoming project will demonstrate "a modular system for the modern pit facility foundry," demonstrating that some significant design work is planned under the DSWEIS's proposed action plan. Taxpayers for Common Sense urges the DOE to take into account the premature nature of these programs and halt funding for them.

If you would like to discuss this further, please feel free to contact me at (202) 546-8500 x106 or [austin@taxpayer.net](mailto:austin@taxpayer.net).

Sincerely,  
 Austin Clemens  
 Research Analyst

A non-partisan budget watchdog  
 651 Pennsylvania Avenue, SE • Washington, DC 20003 • Tel: (202) 546-8500 • Fax: (202) 546-8511 • [staff@taxpayer.net](mailto:staff@taxpayer.net) • [www.taxpayer.net](http://www.taxpayer.net)

1/37.01

**The Magic Carpet, Eileen Jorgensen**  
Page 1 of 1

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

From: Paul Jorgensen [mailto:magiccarpet@sbcglobal.net]  
Sent: Friday, April 23, 2004 8:23 AM  
To: tom.grim@oak.doe.gov  
Subject: nuclear build up at Livermore

Dear Mr. Grim,

1/04.01 I am writing as a concerned citizen to express my dismay about the buildup of nuclear material at Livermore Labs. I am calling on the conscious of people like yourself, Tom, to question the long term wisdom of this plan.  
America needs to lead the world in peaceful settling of misunderstanding, differences and the raw hatred that is so present in the world today.  
America, instead, is generating this hatred and my European relatives as well as my Asian associates are perplexed at our idiotic. We are losing on every front and as a senior member of this society, I am gravely concerned that we are leaving future generations a tangled web of chaos, debt, spiritual impoverishment and cultural dysfunction.

Please let me know what I can do to stop this insanity. Please consider your part in all this.

Best, Eileen Jorgensen

a thing of beauty...a joy forever.  
Paul and Eileen Jorgensen  
The Magic Carpet  
(530) 265-9229  
408 Broad St  
Nevada City, CA 95959  
[www.themagiccarpet.biz](http://www.themagiccarpet.biz)

**The Radio Activist Campaign (TRAC), Norm Buske, Director**  
Page 1 of 13

May 27, 2004

Dear Mr. Grim:

Please consider the following public comment on the LLNL SW/SPEIS, including the attachment, "LLL.data4412.pdf".

Sincerely,  
Norm Buske  
Director, The Radio Activist Campaign (TRAC)  
<[www.radioactivist.org](http://www.radioactivist.org)>  
(360) 275-1351  
7312 N.E. North Shore Road  
Belfair, WA 98528

**SUMMARY:**

The National Nuclear Security Administration (NNSA) employs a methodology in its environmental impact statement (SW/SPEIS) for the Lawrence Livermore National Laboratory that parallels the methodology LLNL employs in its environmental reporting. Therefore, the technical validity of the LLNL SW/SPEIS can be checked by checking the validity of LLNL's ENVIRONMENTAL REPORT 2002.

It is much easier to "predict" present impacts than future impacts. Thus, NNSA must pass the easier test of reporting present impacts from LLNL objectively before predictions of future impacts can be credited as valid.

The Radio Activist Campaign (TRAC) began a radiological survey outside LLNL in December 2003. Analytical results of those initial samples demonstrate that LLNL's environmental reporting is technically invalid and is not protective of LLNL's environment and neighbors. This demonstration is true on a "more probable than not" basis.

1/31.04

In consideration of the methodological parallels with LLNL's environmental monitoring program, the LLNL SW/SPEIS is legally insufficient. The LLNL SW/SPEIS should be redone to provide objective assurance of the validity of the resulting environmental impact statement. Therefore, the LLNL SW/SPEIS should be withdrawn and the fundamental deficiencies corrected.

**INTRODUCTION:**

The National Environmental Policy Act (NEPA) sets legal standards for sufficiency of Environmental Impact Statements (EIS). To be legally sufficient, an EIS must employ a systematic, objective approach that "insures" realism of the detailed statement of the environmental impact of the proposed actions. Therefore, the proposed actions of a legally sufficient EIS must be demonstrably realistic; that is to say, "technically valid."

The approaches for assessing the environmental impacts employed in the LLNL SW/SPEIS are described in Sec. 5.1, Methodology. Neither there or elsewhere in the LLNL SW/SPEIS is there any evaluation of realism (i.e., technical validity) of the

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analyses of environmental impacts. Indeed, the only statement corresponding to the validity of the LLNL SW/SPEIS appears in the last paragraph of the Cover Sheet, namely that the LLNL SW/SPEIS is "timely".

Even though the LLNL SW/SPEIS fails to validate the document's conclusions, they might yet be realistic but not validated. However, lack of technical validation does open the question of whether the analysis and their conclusions in Chapter 5 of the LLNL SW/SPEIS are legally sufficient.

One way for NNSA and the concerned public to check the validity of the analyses underlying the statement of environmental impact in the LLNL SW/SPEIS is to check the analyses of the existing environmental impact of LLNL, as reported in the LLNL ENVIRONMENTAL REPORT 2002 (UCRL-50027-02), against reality. That is to say if the analyses of the existing environmental impact of LLNL are technically valid, then one could justify a confidence in the LLNL SW/SPEIS conclusions. On the other hand, if analyses of LLNL's existing environmental impacts show the conclusions drawn in the LLNL ENVIRONMENTAL REPORT 2002 are unrealistic, then the LLNL SW/SPEIS is logically insufficient, on the basis of technical invalidity. [perhaps you don't need this paragraph?]

2/24.04

Logically, NNSA must demonstrate objective reporting of LLNL's existing environmental impacts for NNSA's analyses of much less certain, future impacts are to meet the legal requirement of sufficient objectivity. --The present is easier to predict than the future.

This logical consideration is strengthened by the parallel designs of the LLNL SW/SPEIS and the LLNL ENVIRONMENTAL MONITORING PLAN (May 1999, UCRL-ID-106132 Rev. 2). The Purpose of the LLNL "Environmental Monitoring Plan (EMP) is to meet the requirements of U.S. Department of Energy (DOE) Order 5400.1" and other DOE orders and guides [p. 1-1]. Similarly, the LLNL SW/SPEIS was prepared "pursuant to NEPA," that is to say, to meet the legal requirements of NEPA.

Both monitoring and LLNL SW/SPEIS plans begin with statements of what is presently on-site and proposed to be on-site. Then various scenarios are analyzed to assess impacts. Present impacts are reported in LLNL's annual environmental reports. Future impacts, with alternative actions proposed on-site, are reported in LLNL's SW/SPEIS. Structurally, the monitoring and SW/SPEIS systems are technically the same. If either is invalid, the other is invalid. One of these systems, LLNL's monitoring program, can be checked for realism by measuring the present environment around LLNL and comparing the results to LLNL's monitoring reports. LLNL's monitoring program must pass this check for the predictions of the LLNL SW/SPEIS to have a reasonable chance of being technically valid.

An opportunity for such a check arose with an independent radiological survey around the LLNL site perimeter in December 2003. That survey was conducted by The RadioActivist Campaign (TRAC), and supported by a grant from the Citizens'

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Monitoring and Technical Assessment Fund. [that's how we're contractually required to refer to the grant.] The radiological results of TRAC's Preliminary Results are compared to LLNL's ENVIRONMENTAL REPORT 2002 of offsite radioactivity, below, to check the radiological aspect of technical validity of the LLNL SW/SPEIS.

**TRAC'S RADIOLOGICAL COMPARISON WITH LLNL ENVIRONMENTAL REPORT:** TRAC staff reviewed LLNL's ENVIRONMENTAL REPORT 2002 before designing an independent radiological survey outside the LLNL perimeter fence in December 2002.

TRAC noted that LLNL radiological monitoring addresses radionuclides reported on the site ("often associated with LLNL" [UCRL-50027-02, p. EX-2]). The two cited radionuclides are tritium and plutonium (isotopes). LLNL's off-site radiological monitoring focuses on sampling and analyses for these two radionuclides, as well as gross alpha and gross beta counting.

TRAC advised LLNL that LLNL's offsite radiological monitoring program is not robust, because it analyzes only for radionuclides "often associated with LLNL." For LLNL's environmental monitoring program to be technically valid, many or most samples collected from off-site must be analyzed for a wide assortment of radionuclides that might conceivably be produced or released from a nuclear weapons laboratory like LLNL.

2/24.04  
cont.

TRAC collected 12 environmental samples from candidate pathways from LLNL in December 2003 and analyzed those samples in TRAC's in-house laboratory. The preliminary results appear in RADIOLOGICAL RESULTS OF INITIAL SAMPLES FROM SOME POTENTIAL PATHWAYS FROM THE LAWRENCE LIVERMORE NATIONAL LABORATORY (LLNL) INTO THE SURROUNDINGS--Part 1 (Rev.3, April 12, 2004) (attached document LLL.data4412.pdf). Please append that report in this comment.

TRAC reported both short-lived (iron-59) and long-lived (strontium-90, cesium-137, and americium-241) downwind or downstream of LLNL [Table 1]. A report of strontium-90 in grass next to a pasture, downwind of LLNL was 190 +/- 160 picocuries per kilogram(wet). That value greatly exceeds a reference value of 8 pCi/kgwet for drinking water, albeit with a low level of confidence.

**CONCLUSIONS:**

(1) TRAC's initial radiological results demonstrate, on a more probable than not basis, that LLNL's environmental monitoring program is not protective of LLNL's surrounding environment and population. This fundamental failure stems from monitoring almost exclusively for radionuclides "often associated with LLNL" for the purpose of meeting regulatory requirements.

(2) LLNL's radiological monitoring program is insufficiently robust to detect and correct its fundamental inadequacies.

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2/24.04  
cont.

(3) These deficiencies of LLNL's radiological monitoring program are severe enough to warrant re-design, from the Plan on up.

1/31.04  
cont.

(4) These demonstrated deficiencies of the LLNL radiological monitoring program translate directly into deficiencies in the LLNL SW/SPEIS. Therefore, the LLNL SW/SPEIS is legally insufficient on the basis of technical invalidity.

(5) The LLNL SW/SPEIS should be rejected as technically invalid. In future EIS preparations, NNSA should include technical validation procedures from the outset. Those procedures will allow early identification of deficiencies and their correction, so the concluding statement of environmental impact is assured to be technically valid.

\_\_\_\_\_ end \_\_\_\_\_

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**Radiological Results of Initial Samples from Some Potential Pathways from the Lawrence Livermore National Laboratory (LLNL) into the Surroundings –Part 1 (Rev.3)**

by Norm Buske, Director, The RadioActivist Campaign  
<search@igc.org>

April 12, 2004

**Introduction and Purpose**

The Lawrence Livermore National Laboratory (LLNL) has provided innovative design and engineering to support the Nation's nuclear weapons program since 1952. The RadioActivist Campaign (TRAC) initiated sampling in the public domain around LLNL in December 2003. This initial sampling seeks to establish a technical foundation to independently assess candidate *pathways* of radionuclides from this *world premier scientific center* into its neighborhood. In consideration of LLNL's key research-and-development role in the Department of Energy's (DOE's) nuclear weapons complex, this study has been designed to reveal artificial radionuclides with half-lives shorter than one week.

TRAC's main concerns are for airborne and waterborne pathways of artificial radionuclides from LLNL into the surrounding neighborhood. Areas of focal interest are *downwind of* LLNL, which is to the northeast, and *downstream of* LLNL, which is Arroyo Seco to the west and Arroyo Las Positas to the northwest of LLNL.

TRAC plans follow-up sampling in May 2004.

TRAC will base its radiological assessment on the results of these two sampling trips and on inputs from public-interest groups, from concerned citizens, from LLNL, and from published information.

**Sampling Narrative**

TRAC staff arrived in Livermore on 13 December 2003. Rainfall a few days before had left a mud puddle near the east side of Greenville Road, northeast of LLNL. Eleven liters (=11 kilograms wet = "11 kgwet") of brown water were collected from the undisturbed puddle. This water was later allowed to settle at TRAC's laboratory and split into an unfiltered fraction (Sample 1) and settled sediment (Sample 2). --Sample Numbers are *contextual* rather than *chronological*. Sample Numbers appear in the headers in Table 1 of the Results.

Following heavy rainfall during the pre-dawn hours of 14 December, TRAC collected samples from the bed of Arroyo Seco, below the west (downstream) side of the South Vasco Road bridge. At the time of this sampling, storm run-off water was augmented by flow from LLNL's A1 Groundwater Treatment facility on the east side of the bridge. 21 kgwet of clear flowing, unfiltered surface water were collected (Sample 8). 0.4 kgwet of young sorrel leaves were collected from this location (Sample 9).

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TRAC then proceeded to one of the upstream drainages into Arroyo Las Positas, on the east side of LLNL. This *upstream* location is *downwind* of LLNL. TRAC collected 20 kgwet of clear flowing, unfiltered surface water from the ditch on the south side of the power substation that is on the east side of Greenville Road (Sample 4). This sampling location was upstream of most drains from the substation. TRAC opted to wait for new grass to grow before sampling grass at this location.

TRAC staff observed fog in the uplands to the northeast (downwind) of LLNL. On 16 December, TRAC checked the roadsides between Altamont and Patterson Passes for suitable sampling locations and sample media. TRAC picked 0.3 kgwet of new grass growing below pastureland and above the north shoulder of South Flynn Road, close to the intersection with North Flynn Road (Sample 3).

On 17 December, TRAC drove along Corral Hollow Road, east of LLNL to LLNL's Site 300. TRAC checked roadside vegetation with a Geiger counter, downslope and downgradient of Pit 6 along Corral Hollow Road. TRAC picked 0.3 kgwet of leaves from a tree incorrectly identified as mountain ash, from the south side of Corral Hollow Road, next to the Carnegie S.V.R.A. and opposite a secondary entrance to Site 300. This Sample 12 was apparently downgradient (in the groundwater flow direction) from Pit 6. A sample of 0.3 kgwet of leaves was then collected from an unidentified tree on the north side of Corral Hollow Road, in a wash below a berm near Gate PER-SW05, below Pit 6 (Sample 11).

Later on the 17th, TRAC staff accessed Arroyo Las Positas, northwest (downstream) of LLNL, on the east side of the South Vasco Road bridge. Arroyo Las Positas was free flowing with water from LLNL. 0.3 kgwet of reed grass was sampled (Sample 6). TRAC used a Geiger counter to select sediment in the arroyo bed as Sample 7.

On 18 December, TRAC staff walked the perimeter of LLNL, checking for "hot spots" with a Geiger counter. An anthill outside the southeast corner of the LLNL fenceline exhibited twice background radioactivity. This anthill, located at the northwest corner of the East Avenue and Greenville Road intersection, was about twenty meters from disturbed grounds within the LLNL perimeter fence. 0.05 kgwet of anthill was sampled. The radioactivity of this Sample 10 decreased to background by the time it was re-checked at TRAC's lab. That decrease suggested the initial radioactivity in the anthill might have originated from natural radon gases permeating into the anthill passages underground.

Finally, TRAC picked 0.4 kgwet of young grass (Sample 5) from the same upstream location in Arroyo Las Positas as surface water had been sampled on 14 December (Sample 4).

#### **Methods Summary**

Sample selection and collection, narrated above, were the front end of an integrated process through a single-pass, radiological analysis in TRAC's lab, leading to post-analysis and ending in this data report.

Water samples were quiescently evaporated, by microwaves, to paste on plastic film. All other samples were oven dried <100C.

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Samples were counted for intervals of 23 hours in a multiply stabilized, well-type, sodium-iodide detector with an energy window from 3 to 3000 KeV. The 8,000-channel, highly nonlinear, acquired spectra were transformed to 165-channel spectra of constant photo-peak width of 3 channels (FWHM). Sample analyses then began with sequential, *true* subtractions of background and reference (standard) spectra.

Each prepared sample was counted as soon as feasible to allow detection of artificial radionuclides with half-lives less than one week. Samples were then recounted, and the initial spectrum minus one or more subsequent spectra provided "short-lived decay spectra." Natural thorium and uranium decay chain spectra were matched to sample spectra (—initial spectra, short-lived decay spectra, and final spectra—) and subtracted to minimize their short-lived and long-lived contributions to the sample spectra.

Other than natural thorium and uranium decay chain imbalances, the prevalent short-lived radionuclide in the samples was beryllium-7 (Be-7), with a half-life of 53 days. Be-7 is produced naturally in the upper atmosphere by cosmic ray spallation of nitrogen and oxygen atoms. This *cosmogenic* Be-7 falls to earth in rain. Be-7 is also produced by artificial nuclear reactions. Be-7 results do not seem to warrant reporting with the artificial radionuclide results in Table 1.

Cesium-137 (Cs-137) is a routine TRAC laboratory analysis, after thorium and uranium interferences have been subtracted. Likewise, americium-241 (Am-241), with its x-ray peak for confirmation, is a routine analysis. Iron-59 (Fe-59) is not a routine analysis for TRAC. This radionuclide was counted on its clean peak at 1099 KeV with the 1292 KeV peak as confirmation, and then reconfirmation by re-counting to check the half-life of 45 days. Uncertainties of the Fe-59, Cs-137, and Am-241 analyses are reported as "±" one standard deviation counting error, as generated by Canberra G2K software.

Strontium-90 (Sr-90) is analyzed by four-point matching a sample spectrum against a standard Sr-90 spectrum, after all radionuclides through Cs-137 have been subtracted from the sample spectrum. This analysis depends on the peculiar shape of the Sr-90 spectrum, with bremsstrahlung features from direct 546 KeV beta decay and subsequent 2186 KeV beta decay, from Compton scattering into the sodium-iodide scintillation detector, and from a characteristic x-ray interaction at about 32 KeV. The standard deviation of an Sr-90 reports is the standard deviation of the repeated results of replicate counts with their separate analyses.

Analysis for unspecified short-lived radionuclides presents challenges: There are potentially so many candidate radionuclides, some unidentified phenomena can easily result in some photopeak(s) being incorrectly attributed to some radionuclide(s) not present in the sample. Such *false positive* results are anti-conservative and improperly raise public concern. On the other hand, if many procedural hurdles are imposed before any short-lived radionuclide is reported, there are excessive *false negatives*, and the environment and public health are inadequately protected. Finally, short-lived radionuclides may disappear before analyses can be replicated independently. This loss of replicability unavoidably compromises the scientific validity of reports of short-lived radionuclides.

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Note that some radionuclides of concern at LLNL do not yield substantial photon activity above 3 KeV. Tritium (H-3) and plutonium (Pu-239, Pu-240) are examples. Such radionuclides are not screened well by TRAC's single-pass procedure. On the other hand, Am-241, the decay daughter of Pu-241, usually accompanies plutonium and so may flag the presence of plutonium in a sample.

**Results**

Preliminary radiological results appear in Table 1, on the next two pages. Before a result is reported here, it must pass through a "detect" screen to avoid a false positive report. Analyses failing to pass this screen are indicated in Table 1 by "--", meaning "not detected."

Sample Numbers in Table 1 are ordered as follows: Samples 1, 2, and 3 are from downwind, northeast of LLNL. Samples 4 and 5 are from downwind but upstream, to the east of LLNL. Samples 6 and 7 are downstream of Samples 4 and 5 and are upwind (northwest) of LLNL. Samples 8 and 9 are downstream, west of LLNL. Sample 10 is anecdotal from the fence line of LLNL. Samples 11 and 12 are down slope and (hydrologically) down gradient of LLNL's Site 300's Pit 6.

Radioactivity is reported as "pCi" = picocurie. All sample radioactivities are reported on a wet weight basis ("kgwet" = kilogram wet) for easy comparison to drinking water standards based on

**one liter = 1 kgwet**

Uniform reporting in units of "kgwet" has the added advantage of easy calculation of bio-accumulation factors, in cases where the same radionuclide is reported in both water and vegetation collected from the water. One pCi/kgwet is one nuclear disintegration per minute, in a liquid pound (one pint). To convert radioactivity results to dry weight basis, multiply the radioactivity by the "Wet/Dry Weight Ratio" in Table 1.

"n/a" means "not applicable". "Wet/Dry Weight Ratio" does not exist for water.

To convert radioactivity to becquerels (Bq), multiply by 0.037.

Sample locations are given by North Latitude and by West Longitude, based on WGS 84 datum, with degrees on the side of Table 1 and minutes tabulated.

"Sample Identifier" is the sample tracking number, which is the year, month, day, and hour of sample collection. For Sample 1, the Sample Identifier is 3z1316, where: the leading "3" = 2003; "z" = December; "13" = 13th day of December; and "16" = 16:00 hours = 4:00 PM.

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**Table 1. Preliminary Radiological Results from First sampling.**

Sample Number. Setting:	1. Mud Puddle	2. Mud Puddle	3. Flynn Pass
Sample Direction from LLNL:	near northeast	near northeast	far northeast
Location:	east side of Greenville Rd, near Hawthorne	as Sample 1.	north side of S. Flynn Rd, west of N. Flynn Rd.
Medium (Material):	unfiltered water	settled sediment	young fine grass
Wet/Dry Weight Ratio:	n/a: 11.22kgwet	984.*	6.8
Photon Radioactivity [pCi/kgwet]			
Iron-59 (Fe-59):	--	--	--
Strontium-90 (Sr-90):	--	--	190±160.
Cesium-137 (Cs-137):	0.02±0.03	0.25±0.06	--
Americium-241 (Am-241):	--	--	--
Latitude: North 37° + minutes:	42.653'	42.653'	42.342'
Longitude: West 121° + minutes:	41.908'	41.908'	38.696'
Sample Identifier:	3z1316	3z1316s	3z1611

\* From 11.22 kg puddle water, sediment settled and was dried to 11.4 g.

Sample No. Setting:	4. Positas East	5. Positas East	6. Positas North
Sample Direction from LLNL:	near east	near east	near northwest
Location:	Arroyo Las Positas bed, southeast of substation, east side of Greenville Rd.	as Sample 4.	Arroyo Las Positas bed, east side of S. Vasco Rd, southeast of train station
Medium (Material):	unfiltered water	young fine grass	reed grass
Wet/Dry Weight Ratio:	n/a: 20.38kgwet	6.2	5.3
Photon Radioactivity [pCi/kgwet]			
Iron-59 (Fe-59):	--	--	290±90
Strontium-90 (Sr-90):	--	--	--
Cesium-137 (Cs-137):	0.03±0.016	2.9±1.6	8.7±2.1
Americium-241 (Am-241):	--	--	4.5±2.0
Latitude: North 37° + minutes:	41.560'	41.561'	41.810'
Longitude: West 121° + minutes:	41.736'	41.735'	43.008'
Sample Identifier:	3z1411	3z1810	3z1713

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Table 1. Completed. Preliminary Radiological Results from First sampling.

Sample No. Setting:	7. Positas North	8. Seco West	9. Seco West
<b>Sample</b> Direction from LLNL:	near northwest	near west	near west
Location:	near Sample 6	Arroyo Seco bed, west side of S. Vasco Rd. bridge	as Sample 8
Medium (Material):	sediment	water	soil
Wet/Dry Weight Ratio:	1.0 nominal*	n/a: 20.66kgwet	8.1
<b>Photon Radioactivity [pCi/kgwet]</b>			
Iron-59 (Fe-59):	--	--	--
Strontium-90 (Sr-90):	--	1.3±0.4	--
Cesium-137 (Cs-137):	--	--	--
Americium-241 (Am-241):	--	--	--
Latitude: North 37° + minutes:	41.807'	40.875'	40.875'
Longitude: West 121° + minutes:	43.023'	43.131'	43.131'
Sample Identifier:	3z1714	3z1409	3z1410

\* The dried weight is taken as the wet weight.

Sample No. Setting:	10. fence SE	11. 300 South	12. 300 South
<b>Sample</b> Direction from LLNL:	@ SE corner	South of Pit 6	SE of Pit 6
Location:	NW corner of Greenville Rd. and East Ave.	North side of Corral Hollow Rd., by Gate PER-SW05	South side of Corral Hollow Rd., opposite Site 300 access
Medium (Material):	anthill	tree leaves	tree leaves
Wet/Dry Weight Ratio:	1.0 nominal*	7.9	3.4
<b>Photon Radioactivity [pCi/kgwet]</b>			
Iron-59 (Fe-59):	--	--	--
Strontium-90 (Sr-90):	--	--	--
Cesium-137 (Cs-137):	--	--	--
Americium-241 (Am-241):	--	--	--
Latitude: North 37° + minutes:	40.792'	38.105'	38.005'
Longitude: West 121° + minutes:	41.813'	32.851'	32.542'
Sample Identifier:	3z1811	3z1712	3z1711

\* The dried weight is taken as the wet weight.

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**Discussion**

Although patterns of the artificial radionuclides reported in Table 1 might be inferred from the descriptions of the sample locations, TRAC awaits the second sampling with its results and completion of this study before drawing specific technical conclusions.

General references for relative comparison of the Results in Table 1 appear in Table 2:

Table 2. Comparison Radioactivities for Results in Table 1.

Federal guidelines for surface water quality			
Fe-59	???	pCi/kgwet	???
Sr-90	8.	"	(40 CFR 141)
Cs-137	200.	"	(EPA-570/9-76-003)
Am-241	15.	"	gross alpha (40 CFR 141)

The only radionuclide report that exceeds its comparison reference value is Sr-90 in Sample 3. The report of 190±160 pCi/kgwet greatly exceeds the reference value of 8 pCi/kgwet, but with a low level of confidence. This result invites follow-up sampling during TRAC's second field trip in May 2004. [Sample 5 also measured positive for Sr-90 (at 240 pCi/kgwet), but this measurement failed a form-fit test for detection and so is not reported.]

General description of each of these radionuclides in the LLNL context follows:

Fe-59: Iron-59 is a short-lived radionuclide, with a half-life of 45 days. Fe-59 is produced by neutron bombardment of steel, for example stainless steel in reactor cooling water pipes. Fe-59 can then be released into circulating water by processes of corrosion or erosion.

Iron is an essential element in trace quantities and has a bio-accumulation factor up to 30,000.

Sr-90: Strontium-90 is a long-lived radionuclide, with a half-life of 29 years. Sr-90 is a main product of nuclear fission. Sr-90 remains from worldwide fallout from testing nuclear weapons in the earth's atmosphere in the 1950s and 60s.

Sr-90 is a main component of liquid waste streams from inadequately managed nuclear reactors, for example into River Techa from the notorious Mayak facilities and into the River Tom from the Seversk reactors in Siberian Russia. Ordinarily, substantial Sr-90 is only released into the atmosphere from industrial-scale nuclear operations in the event of fire. A fire at the Chernobyl Nuclear Power Station in Russia in April 1986 lofted half as much Sr-90 as it lofted its companion fission product Cs-137.

Strontium is in Group 2 of the periodic table of the elements, along with calcium. Sr-90 mimics calcium which is an element essential to cellular control processes. In calcium-poor areas, Sr-90 is concentrated in the food chain, along with calcium.

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Preferential biological uptake of Sr-90 and other natural processes tend to remove Sr-90 fairly quickly from interactions in the biosphere.

The tendency of Sr-90 to mimic essential calcium earns Sr-90 the unusually low guideline value of 8 pCi/kgwet in Table 2.

\_\_\_ Cs-137: Cesium-137 is a long-lived radionuclide, with a half-life of 30 years. Cs-137 remains from worldwide fallout from testing nuclear weapons in the earth's atmosphere in the 1950s and 60s.

Six percent of nuclear fissions yield the inert gas xenon-137, with a half-life of four minutes. Xenon-137 in a main gaseous release from stacks of industrial-scale nuclear facilities that retain waste gases for less than half an hour. The released xenon-137 decays to long-lived Cs-137 within a few minutes, and the Cs-137 falls to earth or is rained out, downwind of the release point.

Cesium is a Group I chemical element, along with potassium. Cesium binds so strongly to clay particles in soils that uptake through plant roots is quickly minimized. Cs-137 most often enters rooted plants, such as grasses, by absorption of fallout into foliage.

Although cesium plays no ordinary biological role, in potassium-poor environs, cesium is taken up as a substitute for potassium. Natural potassium contains 0.012% of the radioactive isotope K-40, with a half-life of 1.27 billion years. K-40 contributes most of the radioactive burden in the average human body. There is thus some reason to believe that evolutionary processes that might provide some bodily protection against radioactive K-40 might also protect against analogous harms from Cs-137. Cs-137 has the relatively high reference guideline of 200 pCi/kgwet.

In most cases, elevated Cs-137 provides a public warning of the presence of radioactive fission products in the environment. In 2003, TRAC reported traces of Cs-137 seeping into the Rio Grande from Los Alamos National Laboratory, as an "early warning." TRAC also reported Cs-137 from fallout in 2003, at a level of "public health concern," downwind of the Department of Energy's Savannah River Site (SRS) in South Carolina. Downwind of SRS, Cs-137 was at least a factor of ten higher than reported here, downwind of LLNL.

\_\_\_ Am-241: Americium-241 is a long-lived radionuclide, with a half-life of 433 years. Am-241 is a byproduct of production of artificial plutonium by neutron bombardment of natural uranium-238. Am-241 exhibits a distinctive photopeak at 59.5 KeV, making Am-241 a readily detectible fingerprint of plutonium.

Americium, plutonium, and other alpha-particle-emitting *actinides* warrant special attention because of their radioactive toxicity. The actinides concentrate and remain in bones, kidney, and liver tissues, where their alpha radioactivity is carcinogenic.

Radiological studies in 1996 and 1997 —after the world's largest underground nuclear explosion, 5 megaton yield "Cannikin" on 6 November 1971, under Amchitka Island in Alaska's Aleutians— reported Am-241 at one pCi/kgwet in aquatic vegetation. That evidence of leakage of artificial actinides from U.S. nuclear weapons testing into the aquatic environment has prompted responsive governmental actions that continue. Although the reported Am-241 content of Sample 6 of the

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present study is greater than the radioactivity of the Amchitka samples, the Am-241 content of Sample 6 is far below the official guideline of concern, 15 pCi/kgwet for gross alpha radioactivity.

\_\_\_ **For more information:**

For a comprehensive background to the subject of radioactivity in the environment, see Merrill Eisenbud's **Environmental Radioactivity from Natural, Industrial, and Military Sources**, published by Academic Press.

Check out <[www.radioactivist.org](http://www.radioactivist.org)> to see how this study compares to other TRAC projects. Go to <[www.resolve.org](http://www.resolve.org)> for information about other studies funded by the MTA Fund.

For information about LLNL's Environmental Community Relations program and environmental monitoring around LLNL by government agencies, go to <[www-envirinfo.llnl.gov](http://www-envirinfo.llnl.gov)>.

To learn of citizens' existing concerns for pollution from LLNL, see Tri-Valley CAREs' website at <[www.trivalleycares.org](http://www.trivalleycares.org)>.

To see how LLNL's national security mission fits into the bigger picture of our society and its democratic institutions, visit the Western States Legal Foundation's website at <[www.wslfweb.org](http://www.wslfweb.org)>.

\_\_\_ **Appreciation**

TRAC thanks Bert Hefner and LLNL staff for technical and logistic interfacing and background for this study, Marylia Kelley of Tri-Valley CAREs for a community perspective, the Alameda County Plutonium Action Taskforce for a pre-existing reference point of community concerns, and those individuals who expressed their own concerns.

This study is supported by a grant from the Citizens' Monitoring and Technical Assessment Fund (MTA Fund).

Please send your comments or questions regarding this data report to the author. Your feedback will help TRAC provide the most useful information in Rev.2 of this report and in subsequent outreach materials. Thank you.

\_\_\_ .End.

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100% post-consumer recycled paper

May 21, 2004

Tom Grim -DOE/NNSA  
Livermore Site Office, L-293  
7000 East Ave.  
Livermore, CA 94550

Dear DOE/NNSA:

The Livermore Laboratory's draft Site-Wide Environmental Impact Statement is not valid.

1/31.03 | It needs to be reviewed by the General Accounting Office or an independent organization for it to have any credibility.  
In hearings, the public reviewed it and found it lacking in content and in the accuracy of figures that were presented.

2/23.01 | The radioactivity release figures are low by factors of thousands to hundreds of thousands based on the leaks that occurred at Rocky Flats, Hanford and even Lawrence Livermore.

3/16.03 | The SWEIS ignores the potential damage to endangered species at Site 300 such as the red-legged-frog. It ignores the fact that there is no current method to dispose of plutonium and that the Lab wants to double the limit of 1540 pounds of plutonium because no other DOE facility will take the plutonium the Lab now has.

4/33.01 |

5/27.02 | The SWEIS does not adequately address the dramatic increase in risk, exposure and accident of airborne plutonium in the Vapor Laser Separator.

6/01.01 | The SWEIS does not address proliferation. A mandate of the Livermore Lab is to prevent proliferation yet building plutonium pits is proliferation.

1/31.03 cont. | The SWEIS is not valid. It needs an independent review as do the assumptions and policies that call for new nuclear and biological weapons.

Sincerely,  
Dennis Thomas  
Dennis Thomas  
147 St. Germain  
Pleasant Hill, CA 94523

Thomas Grim, Document Manager May 26, 2004  
U.S. Dept. of Energy / NNSA  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore, CA 94550-9234

1/04.01 | Re LLNL SW/SPEIS - You're planning on increasing the amount of tritium, lithium, highly enriched uranium, doubling the amount of plutonium at the lab and increasing the amount per room by ten times, and vaporizing Plutonium and you want our opinion?  
Madness! carried to the last degree by adding pathogen such as anthrax, botulism and plague to the mix to make them more lethal for bio warfare. LLNL is already a Superfund cleanup site, has contaminated groundwater, and radioactivity has moved off site and you are considering expanding these horrors?

2/24.01 | Would you kindly come to you sense and spend you money and ingenuity figuring out how to clean up this appalling mess? We are systematically destroying the planet with radioactive waste we have already accumulated and continue to proliferate. Sure Thompson  
Bill Thompson 3084 Jacoby Creek Road  
Bay Side CA 95524

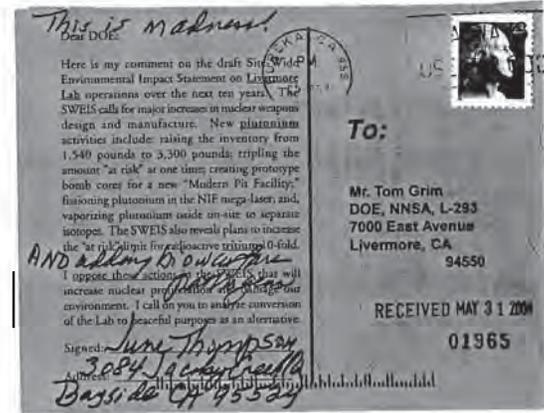
Thompson, John  
Page 1 of 1

Thompson, June  
Page 1 of 1

-----Original Message-----  
From: John Thompson [mailto:magdalen4@mac.com]  
Sent: Thursday, May 20, 2004 1:14 PM  
To: tom.grim@oak.doe.gov  
Subject: Livermore lab

1/07.01

I am opposed to the presence of plutonium at the Livermore Lab, and ask that this location be converted to civilian science projects that will better serve the future needs of taxpaying Americans.  
John Thompson P.O. Box 4353 Carmel Calif. 93921



1/01.01  
2/04.01  
3/07.01

Tobin, Bryndis  
Page 1 of 1

Mr. Grim,

1/02.01 I am horrified - and furious - at the foolhardy notion that the U.S. should build any more nuclear weapons.

2/23.01 I am particularly outraged at the prospect of yet more radioactive waste poisoning not only our "enemies" - and their innocent wives and children - but our brave servicemen & women, currently falling sick at a horrific rate due to overuse, misuse and failure to clean up after previous filthy bombing on our part.

3/30.01 However, I am even more vehemently opposed to the obvious stupidity of increasing the level of radioactive contaminants travelling through and residing in a highly populated sector of the U.S. I deeply resent the notion of making the Bay Area an even more attractive target for terrorists in an attempt to pursue a policy guaranteed to create more terrorists. The only thing this policy has in its favor is that it shows Bush and his cronies to be hypocrites beyond a shadow of a doubt. - Bryndis Tobin

Torres, Zoe Marie  
Page 1 of 1

TO: Thomas Grim

1/04.01 I think you must be an intelligent person. You are probably very kind and maybe you have a family of your own. Children maybe? As a citizen of San Francisco, California, the U.S., and, more broadly and perhaps even more profoundly, as a creature and citizen of this suffering yet always beautiful planet, I, Zoe Torres, implore you to do what you probably, in your heart of kindest hearts, know is right. PLEASE do all that you can to keep the proposal to allow nuclear testing and plutonium at the Lawrence Livermore Labs from passing. Hasn't our planet seen enough violence and destruction? Aren't the cancer rates high enough? The maddening situation in Iraq is just one example of the growing injustice and irrationality taking hold of our leaders. They cannot be trusted with this kind of power! And if you are of the mindset that says yes, they can, then just think of the likelihood of other countries following suit--they cannot be trusted either!

Thank you for your time and understanding, I'm sure that you will do the right thing and vehemently oppose the proposal.

Sincerely,  
Zoe Marie Torres  
437 Randolph st.  
S.F., Ca 94132

Tracy Regional Alliance for a Quality Community  
Page 1 of 1

Tri-Valley CAREs, Loulena Miles, Staff Attorney  
Page 1 of 2

**TRAQC - Tracy Region Alliance for a Quality Community**  
PO Box 1299 Tracy, CA 95378 email [traqc@raqcimn.net](mailto:traqc@raqcimn.net) www.traqc.com

May 21, 2004

Mr. Tom Grim  
DOE, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550  
[Tom.grim@oak.doe.gov](mailto:Tom.grim@oak.doe.gov)

RE: Request for a 30 Day Extension for Public Comment on the Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (LLNL SW/SPEIS)

Dear Mr. Grim:

1/31.06

We have just received the complete three volume document on the Site Wide EIS for the Lawrence Livermore National Lab and Site 300 at your meeting in Tracy on April 28, 2004. We have filed preliminary comments but after review of the draft documents we find it necessary to request the Technical Appendices to these documents to fully evaluate your proposal.

2/31.02

We request the Technical Appendices and an additional 30 days to evaluate and comment on this proposal. TRAQC has grave concerns about additional explosives and radioactive material transported through Tracy and up the unimproved Canal Hollow Rd. We believe that the document does not fully address the development of the Tracy Hills Project a 5,500 unit residential community within one mile of Site 300. We request that the Dept. of Energy extend the public comment period by 30 days from May 27 to June 27 and provide us with the technical agencies to the Draft LLNL SW/SPEIS.

3/20.04

4/09.03

2/31.02

cont.

Sincerely,

**Tri-Valley CAREs**

Communities Against a Radioactive Environment

2582 Old First Street, Livermore, CA 94551 • (925) 443-7148 • Fax (925) 443-0177



May 12, 2004 *Peace Justice Environment since 1983*

Mr. Tom Grim  
Document Manager  
Department of Energy  
National Nuclear Security Administration  
Livermore Site Office  
PO Box 808, L-293  
7000 East Avenue  
Livermore, CA 94551-0808

**Subject: SWEIS reference documents**

Dear Mr. Grim,

Today we received a portion of the reference documents from you that we requested on April 28<sup>th</sup> for the Draft Site-Wide EIS. We offered to provide the community with access to the documents during evenings and weekends. Most of our members work, making the reading room not a practical location for our members to obtain access to these materials. We will ensure that these documents are made available to our members and the community to the fullest extent possible. We appreciate your reconsideration of this matter and your attempt to meet us half-way in responding to our request.

1/31.06

2/25.06

Your accompanying letter contained your rationale for providing only a portion of the reference materials. You stated that you have provided the reference materials that you believed were directly relevant to our comments. We would like to point out that there is an area that we and other commenters highlighted and that is the reference materials for the Accident Analysis - Appendix D. These references are extremely critical to our analysis of the Draft SWEIS. Ensuring that a well thought out study of potential accidents is included in the SWEIS is of the utmost concern to our members. An accident at the lab could be catastrophic and community members (including workers) need to be able to ascertain that these scenarios were carefully considered. We would appreciate if you could provide us with the underlying reference documents for the accident scenarios. These documents will provide the slope factors and the assumptions that were made in determining the likelihood that an accident will occur and what the consequences would likely be.

3/31.02

Additionally, with 10 working days left before the comment deadline, we also feel it would be prudent for the Department of Energy to extend this deadline for at least one

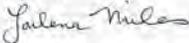
Tri-Valley CAREs, Loulena Miles, Staff Attorney  
Page 2 of 2

3/31.02  
CONT.

month in order to ensure that legislators, regulators and community members have a meaningful opportunity to comment on this 2000-plus page document. The hearings on April 27<sup>th</sup> and April 28<sup>th</sup> were the vehicle through which many people in the surrounding areas learned about many of the new proposals in the Draft Site-Wide EIS. As we stated at the April 28<sup>th</sup> hearing in Tracy, community members had told us they felt they needed additional time and information in order to fully comment. Our office has received a number of calls from community members and organizations who are attempting to read through the document but are worried that they won't have time to review it and write their comments before the deadline. In light of this, we again urge you to extend the comment deadline for an additional 30 days.

Thank you in advance to your attention to this matter.

Sincerely,



Loulena Miles  
Staff Attorney  
Tri-Valley CAREs

Tri-Valley CAREs, Marylia Kelly, Executive Director  
Page 1 of 2

**Grim, Tom**

From: marylia@castlink.net  
Sent: Monday, May 10, 2004 11:06 AM  
To: heffner1@llnl.gov; tom.grim@oak.doe.gov  
Subject: SWEIS: Follow up on Request for Reference Documents

May 7, 2004

Bert Hefner  
Lawrence Livermore National Laboratory  
7000 East Avenue  
Livermore, CA 94550

By email

RE: Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (February, 2004)

Dear Bert:

The recent release of the Site Wide EIS for Livermore Lab operations and the subsequent Public Hearings have resulted in numerous requests made to our office for more complete information. We have heard from Livermore and Tracy residents among others. We are called upon to respond to physicists, chemists and other specialists as well as other community residents.

On behalf of Tri-Valley CAREs' membership and other information requesters in the community, I am sending this follow up letter to ask that Tri-Valley CAREs receive all of the unclassified and/or declassified reference documents for the draft site-wide EIS.

This request for the reference documents follows the conversation held during the question and answer period during the Public Hearing in Tracy, California on April 28. During that time, a request was made by Marion Fulk, LLNL staff scientist retired, for the background documents. As I stated at the Public Hearing, Tri-Valley CAREs offices are generally open to the public 6 days a week (Mon through Sat.). I also stated our request for the documents and our willingness to put them in our reading room where they will be accessible to all visitors. Additionally, we have a check out system available on request for documents in our reading room. This will allow members of the public to borrow any document(s) for a limited period of time.

Here is what members of the public are telling us. It is impossible to adequately evaluate the site wide EIS without the reference documents on which the conclusions in the site wide EIS are based. The LLNL visitors center is open only select afternoon hours during the work week. The background/reference documents for the site wide EIS are not easily accessible and there is no opportunity to check them out from LLNL.

Therefore, we believe that giving Tri-Valley CAREs a set of reference documents is consistent with DOE and LLNL obligations to inform the public and encourage public comment on the site wide EIS.

I have not heard from LLNL or DOE since the Public Hearing on this issue, and so I write you today. I would very much appreciate your prompt attention to this as the comment period is currently

1/31.06

Tri-Valley CAREs, Marylia Kelly, Executive Director  
Page 2 of 2

scheduled to end on May 27 - and it will take Tri-Valley CAREs of the public some number of days (if not weeks) to go through the materials.

Sincerely,  
Marylia Kelley  
Executive Director

2/31.02 P.S. As you know, Tri-Valley CAREs has requested a 30 day extension of the public comment period from DOE. This letter reiterates that request as well. The site wide EIS is a complex document and it does require the additional time to produce thorough and informed comments.

-MK

cc  
Tom Grim, U.S. DOE, NNSA

Marylia Kelley  
Executive Director  
Tri-Valley CAREs  
(Communities Against a Radioactive Environment)  
2582 Old First Street  
Livermore, CA USA 94551

<<http://www.trivalleycares.org>> - is our web site address. Please visit us there!

(925) 443-7148 - is our phone  
(925) 443-0177 - is our fax.

Tri-Valley CAREs, Marylia Kelly, Executive Director  
Page 1 of 2

**Grim, Tom**

From: marylia@earthlink.net  
Sent: Friday, May 21, 2004 5:17 PM  
To: tom.grim@oak.doe.gov  
Subject: Note on SWEIS extension request

Hi, Tom:

Apologies for the informality of an email note, but I want to convey a couple of things regarding our request for an extension of the public comment period for the SWEIS.

First, I want to acknowledge, again, that I recognize that a 90 day comment period is more than is legally required. When you first announced a 90 day comment period, I first thought that would be plenty of time for us to analyze the document. Then I started reading it. I am now acutely aware that TWO things are true. One, that 90 days is more than the legal minimum, and two that the SWEIS for LLNL is more complex than your average SWEIS.

This is perhaps the long way around to saying that I am still reading through the SWEIS and I have the reference documents (some in our office - thanks - and some at LLNL) that I want to go through before we submit our organizational comments. As you doubtless know, some of those reference documents are heavy slogging and collectively there are boxes and boxes of them! While DOE may decide to differ with us on the content of some of Tri-Valley CAREs comments, it is none the less true that I am doing my best to do a good job on them - and I really do need more time.

1/31.02, 31.06 Second, it is equally true that other groups and individuals have called us to ask if we have received or will receive an extension. Over the last couple of days, I have begun telling people that I don't know and that folks should communicate with you directly. Perhaps they have, perhaps not. At any rate, I know that others in addition to Tri-Valley CAREs - including but not limited to the 21 groups who signed the request letter -- would truly benefit from an extension of the comment period.

And, finally, DOE would not necessarily need to stretch its own schedule in order to grant an extension of the public comment period. For example, DOE needs to compile the transcripts from the public hearings. The DOE could do that and also could begin processing, tabulating and internally responding to the comment letters received to date even as the comment period is extended. Therefore, an extension of the comment period need not mean ANY slippage of the December date for circulating the final.

In closing, I reiterate our request for a 30 day extension, but would add that even a two week extension would help a lot! Please consider this option if you truly think 30 days is too much. My goal here is to provide comments that are as in-depth and complete as I can make them, not to bolx up your schedule. In considering this request, please remember how long it took DOE between scoping in 2002 and the circulation of the draft in 2004. It really is a complex document!

Thank you in advance for your attention.

Peace,  
Marylia

Tri-Valley CAREs, Marylia Kelly, Executive Director  
 Page 2 of 2

Marylia Kelley  
 Executive Director  
 Tri-Valley CAREs  
 (Communities Against a Radioactive Environment)  
 2582 Old First Street  
 Livermore, CA USA 94551

<<http://www.trivalleycares.org>> -- is our web site address. Please visit us there!

(925) 443-7148 - is our phone  
 (925) 443-0177 - is our fax

Tri-Valley CAREs, Marylia Kelly, Executive Director  
 Page 1 of 3

**Tri-Valley CAREs**  
 Communities Against a Radioactive Environment  
 2582 Old First Street, Livermore, CA 94550 • (925) 443-7148 • Fax: (925) 443-0177



Sent by email and postal mail

June 14, 2004

Mr. Tom Grim  
 Document Manager, SWEIS  
 U.S. Department of Energy, NNSA, L-203  
 7000 East Avenue  
 Livermore, CA 94550

**Additional Comments of Tri Valley CAREs on the Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement (SWEIS)**

Dear Mr. Grim:

As I discussed with you by phone and in prior correspondence, Tri-Valley CAREs needs additional time to complete its comments on the Draft SWEIS. As the Department of Energy (DOE) has refused to extend or reopen the public comment period, I am therefore sending these additional comments as soon as practicable -- even though they are a "work in progress" in the sense that Tri-Valley CAREs has not had time to finish an analysis of the unclassified reference documents that we received from DOE near the end of the public comment period. (Further, we have still not received any substantive documents in response to our two relevant Freedom of Information Act (FOIA) requests.)

These additional comments and questions follow an initial reading of as many of the reference documents as is possible by this date. This comment letter focuses on the unclassified reference documents for accidents and Appendix D of the SWEIS. Again, it is not that Tri-Valley CAREs does not have other concerns/questions/comments -- e.g., on other reference documents -- it is that appropriate time was not given to undertake the necessary analyses and prepare those comments.

**Accident -- Unclassified Reference Documents**

1/31.06 1. The accident analysis for bio-hazards incorporates analyses previously performed by the U.S. Army in 1989. We are certain that this information is out of date. Have there been additional accident analyses performed by NNSA for bio-hazards resulting from operation of LLNL? If so, please identify these analyses.

2/25.04 2. Has the accident analysis for the Biosafety Level-3 (BSL-3) been updated to account for additional plutonium and tritium handled and processed under the proposed action? If so, please provide this document or identify it in the background documents.

Tri-Valley CAREs, Marylia Kelly, Executive Director  
Page 2 of 3

Tri-Valley CAREs, Marylia Kelly, Executive Director  
Page 3 of 3

3/31.06

3. After reviewing the available Background Documents relating to the accident analysis, Tri-Valley CAREs has determined that documents regarding several buildings in the Superblock were not included. As a result, we cannot check the references in the document to determine the adequacy of the SWEIS. The missing documents include:

- LLNL, *Safety Analysis Report, Heavy Element Facility, Building 251*, UCRL-AR-113377, Rev. 1, Lawrence Livermore National Laboratory, Livermore, CA, April 1, 2001.
- LLNL, *Building 334 Safety Analysis Report*, SAR-B334, Rev.1, Lawrence Livermore National Laboratory, Defense and Nuclear Technologies Directorate, Livermore, CA, March 2001.
- LLNL, *Building 331 Safety Analysis Report*, TSR B331, Lawrence Livermore National Laboratory, Livermore, CA, June 2002.
- LLNL, 2002af LLNL, *Building 332 (UNCL) Plutonium Facility Safety Analysis Report*, SAR-332, NMTP-02-067, Lawrence Livermore National Laboratory, Nuclear Materials Technology Directorate, Livermore, CA, June 26, 2002.
- LLNL, *Building 332 (UNCL) Plutonium Facility, Safety Analysis Report*, Vol. 2, Chapt. 6-17, UCRL-AR-119434-00, Lawrence Livermore National Laboratory, Defense and Nuclear Technologies Directorate, Livermore, CA, February 2002.
- LLNL, *Safety Analysis Report and Technical Safety Requirements Regarding B332 DSA*, Lawrence Livermore National Laboratory, Livermore, CA, October 10, 2003.

4/25.06

4. Based on the inventory of radiological materials, B-327 was determined to be a Radiological Facility (Hazards Analysis Report, October 2000). There are also explosive substances stored at this location. Because of these two types of materials, B-327 should be included in the Accident Analysis in Appendix D. In addition, lithium hydride and beryllium are used at this facility. Both warrant investigation in the SWEIS.

5. As we have addressed in our initial comments, Appendix D is deficient in that it does not explain the derivation of accident frequencies. It also does not provide a means of understanding the accident frequencies. Some of this is included in the background documents. For example, Section 3 of the Safety Analysis Report (SAR) for B-696R, June 2002 provides the general methodology used, and should be brought forward into the text of Appendix D. For example, accidents are divided into four groups: those that are anticipated (occurring once every 100 years); those that are unlikely (occurring once every 100 to 10,000 years); those that are extremely unlikely (once every 10,000 to 1 million years) and those that are beyond extremely unlikely (less than once every 1 million years). However, this by itself is deficient. For these levels, which are used in Appendix D, the reasoning behind the selection of the level is very general, if stated at all. It does not appear that the history of accidents that led to environmental releases at LLNL, and the history of violations, have been taken into consideration in deriving these estimates of accident frequency.

4/25.06 cont.

6. The SAR for B-696R (p. 3-7) states that "For unmitigated frequency estimates, equipment failures are "anticipated" (i.e., occurring once every 100 years)". Equipment failures should be thoroughly analyzed in Appendix D.

7. The SAR for B-696R states that a criticality accident would be "beyond extremely unlikely". However, it would be logical that in an airplane crash scenario, drums could be damaged and brought close together resulting in a criticality event. This is a failure in the background document, and therefore a criticality event should be considered in an air craft crash scenario in Appendix D. Furthermore, the analysis of an airplane crash was not prepared per DOE STD-3014 (see p. 3-9). Therefore, the risk estimate provided in Appendix D has not undergone the correct procedure.

8. Regarding Appendix D, (Table D.2.4-1), the risk of an air craft crash is less than a spill of TRU waste or a deflagration event. These events are not fully analyzed in the SWEIS, and they should be.

9. The SAR for B-696R states (p. 3-24) that the maximum amount of plutonium equivalent Curies (PE Ci) per container is 8 Ci, and not more than 25 PE-Ci per array. This is inconsistent with the levels stated in the SWEIS (i.e., 12 PE-Ci per container). Therefore, the source term for the SAR should be revised. Has there been an amendment to the SAR?

10. Regarding Document 2055 "Memo to Tom Grim 1/27/04", please reconcile and explain crash probabilities for Building 696R, 625, 239, 331, 332, and 334 with those found in the SWEIS.

11. Regarding background document 869 "LLNL Site Wide EIS presented to Dave Conrad November 8 2002, the following information is provided concerning TRU waste is provided: under the no action alternative, D&D activities at B-332 will produce between 20 and 50 drums of TRU per year. What number is used in the SWEIS, and please explain how these values are derived.

12. The preliminary SAR for the Decontamination and Waste Treatment Facility (Sept. 1996) assumes that the tritium in a single container is assumed to be 3,000 Ci. Has this value been incorporated into the SWEIS? If it has changed please provide the reasoning or the citation.

Thank you for including these additional comments and DOE's responses in the SWEIS.

Sincerely,



Marylia Kelly  
Executive Director  
Tri-Valley CAREs  
2582 Old First Street  
Livermore, CA 94551  
PH: (925) 443-7148, FX: (925) 443-0177, WEB: www.trivalleycares.org

May 27, 2004

**Public Comment and Analysis**

*From*

Marylia Kelley Executive Director	Loulena Miles Staff Attorney	Inga Olson Program Director
Tara Dorabji Outreach Director	Peter Strauss Technical Consultant	Matthew Liebman Legal Intern

Tri-Valley CAREs (Communities Against a Radioactive Environment), Livermore, CA

*To*

U.S. Department of Energy, National Nuclear Security Administration

*For*

Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement, February 2004 (SWEIS)

*Tri-Valley CAREs' comments on the Draft SWEIS are structured as follows:*

**I. PURPOSE AND NEED**

- a. Inconsistency
- b. Wastefulness
- c. Proposed Actions
- d. Precaution

**II. ALTERNATIVES ANALYSIS**

- a. No Plutonium Mission
- b. Enhanced Civilian Science

**III. CUMULATIVE IMPACTS**

Tri-Valley CAREs' Comment on DOE Draft SWEIS for LLNL Operations - Page 1

**IV. TREATIES**

- a. Non-Proliferation Treaty
- b. Biological and Toxin Weapons Convention

**V. SPECIFIC PROGRAMS AND ACTIVITIES**

- a. National Ignition Facility and New Experiments
- b. Biological and Biotechnology Research Program and the BSL-3
- c. Increase in Plutonium Storage Limit
- d. Tritium Increases, Manufacture of NIF Targets
- e. Enhanced Test Readiness
- f. Plutonium Bomb Cores
- g. New and Modified Weapons Development
- h. Energetic Materials Processing Center
- i. Plutonium Atomic Vapor Laser Isotope Separation
- j. Advanced Simulation and Computing Initiative and Terascale

**VI. OVERALL CONCERNS**

- a. Seismicity
- b. Environmental Justice
- c. Categorical Exclusion
- d. Accident Analysis
- e. Emergency Response
- f. Transportation
- g. Containers for Waste Transport
- h. Risks to Workers and Community
- i. Biological Assessment
- j. Superfund
- k. Site 300
- l. Waste Management
- m. Decontamination and Decommissioning
- n. Probabilistic Risk Assessment
- o. California Environmental Quality Act
- p. Freedom of Information Act

**VII. DOCUMENT STRUCTURE**

- a. Integration
- b. Cross-referencing and Indexing
- c. Plain English

**VIII. CONCLUSION**

2

Tri-Valley CAREs  
Page 3 of 63

Mr. Tom Grim  
Document Manager, SWEIS  
Department of Energy /  
National Nuclear Security Administration, L-293  
7000 East Avenue  
Livermore, CA 94550

Also transmitted by email without attachments to: [tom.grim@oak.doe.gov](mailto:tom.grim@oak.doe.gov)

**RE: The Department of Energy (DOE) / National Nuclear Security Administration (NNSA) Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory (LLNL) and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement, February 2004 (generally referred to as SWEIS)**

Dear Mr. Grim:

In submitting our organization's comment letter, we reiterate and incorporate our request for an extension to the public comment period. Tri-Valley CAREs' initially submitted its request for a 30-day extension to the public comment period on April 28, 2004. We submitted a follow-up letter on May 11, 2004, and nearly two dozen local, regional and national organizations joined us in that request. Since that time, we have heard from many other public interest organizations and government agencies that they have likewise requested that DOE extend the public comment period for 30 days.

1/31.02,  
31.06

We have followed up with phone calls and emails to DOE emphasizing the reasons necessitating our request, which include the length of the draft document (around 2,500 pages), the technical complexity of the document and the number of new programs and activities proposed. Further, we had requested that DOE provide Tri-Valley CAREs with the unclassified reference materials for the SWEIS. We received some (though not all) of them from DOE -- but not until the public comment period was nearly over. We cannot review these documents thoroughly without an extension of the comment period.

Moreover, we filed requests under the Freedom of Information Act on two programs in the Draft SWEIS -- but have not received any substantive response to date. One request is for an unclassified (or declassified) copy of the National Environmental Policy Act document cited by DOE in the SWEIS as having been prepared for the use of plutonium in the Advanced Materials Program. The other involves transuranic waste at Livermore Lab. Therefore, the comments that follow are necessarily limited to the documents we were able to review without the requested extension of the public comment period.

Tri-Valley CAREs is a non-profit organization located in Livermore, California. We have undertaken this analysis of the Department of Energy / National Nuclear Security Administration Draft Site-Wide Environmental Impact Statement for Continued Operation of the Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic

Tri-Valley CAREs  
Page 4 of 63

Environmental Impact Statement on behalf of our approximately 4,800 members. In cases where we have felt the document left out necessary source material, we have provided supplementary material attached to this comment (but not included in the email version). We request that these materials, along with our comment letter, be reviewed, responded to and included in the record.

2/01.01

Tri-Valley CAREs has been monitoring LLNL activities for more than twenty years. During these past two decades, Tri-Valley CAREs has participated in numerous NEPA review activities involving LLNL and other sites in the DOE nuclear weapons complex. Many of the activities and programs considered in this Draft SWEIS are unnecessary, environmentally hazardous and proliferation provocative. In short, they propel the Livermore Lab in a dangerous and wrong direction.

3/31.04

Further, Tri-Valley CAREs believes that this document is so deficient in information and analysis in key areas that the public and decision-makers cannot evaluate it as-is on its merits. We therefore request that this document be re-circulated in draft form so that the community, legislators and regulatory authorities alike will have an opportunity to evaluate the new information that is requested in our and other public comments.

**I. DOE MUST REVISE THE PURPOSE AND NEED STATEMENT IN THE SWEIS**

The Purpose and Need statement should be clear and focused; it bounds the "reasonable" range of alternatives that must be evaluated in a SWEIS. DOE's National Environmental Policy Act (NEPA) Recommendations for the Preparation of Environmental Impact Statements directs that:

4/02.01

The statement of the agency's underlying purpose and need is critical to identifying the range of reasonable alternatives. If the purpose and need are defined too broadly, the number of alternatives that might require analysis would be virtually limitless. It is inappropriate in most situations, however, to define purpose and need so narrowly that only the proposed action would meet the need. The proposed action is generally only one means of meeting the agency's purpose and need for action.

In this case, DOE's purpose and need statement is internally inconsistent. It is written so as to result in a too-narrowly-defined range of alternatives. It is wastefully overbroad, in part because it fails to analyze or consider instances where the current or proposed LLNL activity is duplicative of work performed at another DOE facility and/or may be unnecessary. Finally, the Purpose and Need statement in the Draft SWEIS does not provide evidence of any specific need or a clear justification for the proposed action.

5/31.10

Because the document's Purpose and Need is directly related to the range of alternatives to be considered, Tri-Valley CAREs also recommends that DOE adopt the precautionary principle as a decision-making tool, and incorporate it into the Draft SWEIS.

Tri-Valley CARES  
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**a. The Purpose and Need is Internally Inconsistent**

6/02.01 The Draft SWEIS states: "The continued operation of LLNL is critical to NNSA's Stockpile Stewardship Program and to preventing the spread and use of nuclear weapons world wide." This first sentence of the Purpose and Need section defines the two major purposes of LLNL as: support the Stockpile Stewardship and Management program (SSM) and prevent nuclear proliferation. The SSM program is an aggressive nuclear weapons program that is currently developing new and modified nuclear weapons. Curtailing this nuclear weapons development aspect of the SSM program and limiting it to a passive "curatorship" of the existing arsenal would likely prove to be the most direct and effective means by which DOE could pursue its goal of "preventing the spread and use of nuclear weapons worldwide."

7/01.01, 02.01 SSM, as currently carried out, creates vertical proliferation and promotes horizontal proliferation. In the SWEIS, DOE says the goal is to stem proliferation. It also says its goal is "critical" to achieving the SSM program outcomes. How can an activity that by design will provide for the vertical proliferation (or "improvement") of U.S. nuclear weapons and is controversial internationally for its proliferation impacts be said to prevent proliferation?

As part of its Purpose and Need, DOE explains a portion of the Nuclear Posture Review, which is of particular interest, "the third element of the new triad, which reflects a broad recognition of the importance of a robust and responsive nuclear weapons infrastructure in sustaining deterrence. In this respect, the nuclear posture review notes that the flexibility to sustain the US nuclear weapons stockpile depends on a robust program for stockpile stewardship" (S-2).

According to the Draft SWEIS, the strategic purposes that support SSM and the Nuclear Posture Review at LLNL are:

- "warhead evaluation, maintenance, refurbishment and production planned in partnership with DoD", and
- "develop[ing] the scientific, design, engineering, testing and manufacturing capabilities needed for long term stewardship of the stockpile" (P 1-3)

Thus, DOE asserts that a "robust" stockpile stewardship program is needed for "flexibility." This in turn is used as justification for the development of new and modified nuclear weapons -- such as the Robust Nuclear Earth Penetrator on which LLNL is presently conducting development activities.

How do the above listed strategic purposes fulfill the legal obligation to Article VI of the Non-Proliferation Treaty (NPT), to which the U.S. is a signatory? How do they serve DOE's own stated mission of preventing the use and spread of nuclear weapons worldwide? DOE's Stockpile Stewardship goal stands in contrast to U.S. disarmament obligations under Article VI of the NPT, which states:

"Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nu-

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clear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control."

7/01.01, 02.01 cont. At the Non-Proliferation Treaty conference, the U.S. contended that plans for modernization of the U.S. arsenal were purely "conceptual." However, the SWEIS provides for empirical modernization. According to Members of the U.S. Congress (including California Senator Dianne Feinstein) and numerous international diplomats, this "modernization" of the arsenal, which includes the development of a Robust Nuclear Earth Penetrator, is likely to ignite a new arms race. Moreover, experts, including Ray Kidder (senior scientist, LLNL, retired), Dick Garwin, Robert Civiak and many others have pointed out that "modernization" is not necessary for maintaining the current stockpile and may, in fact, erode its safety and reliability. See, for example, Managing the U.S. Nuclear Weapons Stockpile: A comparison of Five Strategies. (Attachment 1, Executive Summary -- full report is at www.trivalleycares.org ).

A thorough analysis of U.S. obligation under Article VI of the NPT is missing from the Draft SWEIS. Inclusion of a thorough analysis is needed to properly reconcile the contradiction because while the current configuration of the Stockpile Stewardship program (which is only one of numerous ways it COULD be configured) and the Nuclear Posture Review are U.S. policy, the NPT along with the U.S. Constitution itself is the supreme law of the land. The NPT and the posture review are simply not of equal legal "weight" and gravity, though the Draft SWEIS pretends otherwise. Please incorporate the NPT for consideration in the SWEIS, along with the needed analysis and an internally consistent Purpose and Need statement. (Attachment 2)

8/07.01 The Purpose and Need statement should also reflect the important role that civilian research plays at LLNL, a role that could reasonably increase in the coming decade. In this regard, we note that even the LLNL Institutional Plan 2003-2008 devotes a higher percentage of its space to the Lab's civilian programs in basic science, energy, and the environment than does the Draft SWEIS. (Attachment 3)

9/07.01 01.01 The use of an internally inconsistent Purpose and Need statement, taken together with the omission of a full discussion of U.S. obligations under Article VI of the NPT, has fatally prejudiced the alternatives analysis in the Draft SWEIS by allowing it to artificially neglect due consideration of the expanded role that civilian science programs at the Livermore Lab could play in the next decade. Thus, connected to revising the Purpose and Need, the alternatives analysis section should likewise be revised. The alternatives analysis should include a scenario wherein civilian sciences and cleanup activities at Livermore Lab are expanded and the development of new and modified nuclear weapons is curtailed.

10/08.02 Moreover, as we will describe, the Draft SWEIS has improperly written the Purpose and Need so as to also omit needed analysis of a feasible alternative involving the dramatic reduction or termination of plutonium activities at LLNL.

These alternatives would better serve DOE's stated goal of "preventing the spread and use of nuclear weapons worldwide."

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**b. The Purpose and Need is Wastefully Overbroad**

The Draft SWEIS does not analyze programs and activities at LLNL in the context of what is already occurring or planned at other sites within the DOE nuclear weapons complex.

Additionally the SWEIS does not look at LLNL's competencies that may be complementary to, rather than independent of, other DOE sites. This failure prejudices the Purpose and Need and the subsequent alternatives analysis because it incorrectly assumes that if the U.S. has an identified "need," Livermore Lab is necessarily the site to "fill" it. For example, the aforementioned LLNL goal of carrying out SSM and the Nuclear Posture Review's activities in

- "warhead evaluation, maintenance, refurbishment and production planned in partnership with DoD", and
- "develop[ing] the scientific, design, engineering, testing and manufacturing capabilities needed for long term stewardship of the stockpile" (P 1-3)

is not only contradictory to U.S. disarmament obligations, it is also a wasteful duplication of activities and capabilities at other DOE facilities, most notably at the Los Alamos and Sandia National Labs.

Programs and activities at other DOE sites that are related to the proposed action and the no action alternative should be evaluated as "connected actions". Many of the programs that are considered essential to fulfill DOE's mandate are only arguably so when Livermore Lab is considered within a vacuum. Connected or related actions on or off-site should be mentioned and a description as to why the proposed (or current) action is needed in addition to the related actions should be provided.

Multiple examples of duplicative programs exist – in fact the DOE in other documents calls many of the programs at Livermore, Los Alamos and Sandia "complementary," which our dictionary defines as meaning "duplicative."

One example is that similarly-capable supercomputing facilities – each very big, very expensive, and with a voracious appetite for energy and water – are being built at Livermore, Los Alamos and Sandia Labs. Each is called "needed" by DOE for the SSM mission. The Draft SWEIS echoes this rationale for LLNL's. But, are three such supercomputing complexes really equally "needed" – or is there wasteful duplication? The SWEIS must analyze this question, not only with respect to LLNL's proposed Advanced Simulation and Computing Initiative facilities, but for all major programs on site at various locations.

The Purpose and Need should be revised to take every precaution that scarce taxpayer dollars are not wastefully being expended on duplicative and unnecessary projects. Moreover, the environmental footprint for an activity can be made smaller by not carrying it out at multiple, duplicative facilities.

11/08.01 cont. Again, a range of reasonable alternatives should include alternatives that ramp down nuclear weapons activities at LLNL and at least one that curtails nuclear weapons development, a.k.a. "modernization," at Livermore Lab altogether.

**c. The Purpose and Need Provides No Specific or Clear Justification for the Proposed Actions**

NEPA requires that the proposed action be adequately defined and all relevant information presented accurately. We believe that several of the "Major Decision" outlined in the SWEIS do not provide legislators, regulators or community members with adequate information to evaluate the justification or the burdens associated with the proposed new projects. Specifically:

Tritium Facility Material At-Risk Limit: The proposed action in the SWEIS will increase the "at risk" limit for tritium (radioactive hydrogen) from the current 3.5 grams per single room/process to 30 grams per room/process. This section in the SWEIS fails to describe that the proposal not only represents a dramatic increase, but also a major departure from prior plans contained in the National Ignition Facility (NIF) project-specific Environmental Impact Statement (EIS) portion of the 1996 Stockpile Stewardship and Management Programmatic EIS. In the prior document the tritium-filled targets for the National Ignition Facility were to be fabricated off-site. This decision to NOT manufacture the NIF targets on site at Livermore was reiterated publicly by LLNL management officials, who stated that the tritium fills would not be done on site because the operation would be too polluting to be conducted in such a highly populated area. The population density hasn't changed -- except to increase. Yet, in the Draft SWEIS, suddenly it is proposed that the tritium targets WILL be manufactured at LLNL.

Tritium target fabrication presents many unstudied risks and should be given a more substantial treatment in this SWEIS. The lack of an adequate description of the proposal in the Draft SWEIS leaves us no way to comment on mitigation measures. The lack of an adequate description also inhibits our ability to fully comment on the risks. However, we can extrapolate from LLNL's historical record for use of tritium in program activities for a glimpse into likely airborne releases. That record shows numerous accidental airborne releases at LLNL, totaling between 750,000 and one million curies since 1960 (no data is available for LLNL's early years from 1952-1960). That record also shows that when LLNL analyzed Livermore Valley wines the tritium concentrations were routinely elevated, and, in 1989, for example, were at 4 times the tritium content of other California wines. Moreover, other area agricultural products were also found to contain elevated levels of tritium. Local rainfall was also found to have high levels of tritium. (Attachment 4)

The levels of tritium contamination in the environment have become lower in recent years due to a decline in program activities at LLNL using tritium – particularly a decline in those program activities involved in packing tritium under high pressures (such as would occur in fabricating tritium targets for the NIF). The proposed action here represents a radical departure from the original NIF proposal – yet no clear justi-

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12/34.01, 26.04 cont.	<p>ification for the change is offered. Please detail in the SWEIS a clear statement of the purpose and need for manufacturing tritium targets on-site at LLNL.</p>
13/39.01	<p><u>Enhanced Test Readiness:</u> To enhance U.S. readiness to conduct a full-scale, underground nuclear test in Nevada is one of the reasons for the proposed action to increase the tritium at risk level at LLNL nearly ten-fold (the other being the aforementioned on site fabrication of NIF targets). Yet, the Draft SWEIS does not describe the enhanced readiness project in any meaningful detail. Therefore, the Draft SWEIS falls far short of its role under NEPA to provide decision makers and the public with sufficient information to comment on the impacts, alternatives and potential mitigation measures associated with this project. Moreover, this project may substantially undermine U.S. commitments made in 2000 at the NPT conference to work toward ratification of the Comprehensive Test Ban Treaty, a treaty to which the U.S. is currently a signatory though it has not been ratified. The “need” for enhanced test readiness activity at LLNL and its relationship to a potential U.S. return to full-scale nuclear testing should be examined in detail, yet the Draft SWEIS contains no clear justification for the project. Additionally, the Nevada Test Site sits on Western Shoshone ancestral land. Did DOE conduct outreach to the public and First Nations around the Nevada Test Site to solicit their comment on this Draft SWEIS, since the outcome of this project could have huge implications for their communities? What kind of specific outreach was done to community groups or tribal leaders in Nevada and Utah?</p>
14/37.01	<p><u>Prototype Plutonium Bomb Cores:</u> The Draft SWEIS contains plans to develop new technologies at LLNL that would be used in DOE’s proposed Modern Pit Facility (MPF). Yet, the Draft SWEIS doesn’t offer any justification for its program of going forward with the start-up or design work for a Modern Pit Facility. The Draft SWEIS does not justify the “need” to develop new technologies for producing plutonium pits. It fails to adequately account for the fact that the Los Alamos Lab is currently manufacturing replacement plutonium pits for the arsenal using technologies that are (a) similar to those LLNL will be developing (e.g., both will employ net casting techniques) and (b) more certain as to outcome as those techniques are less experimental because they are presently in use. We understand that DOE may WANT to develop new technologies in addition to those already in use – but desire is not justification. The Draft SWEIS further fails to explain why LLNL must be the site chosen for the development of new technologies for plutonium pit manufacture.</p> <p>The SWEIS should discuss the fact that the MPF is extremely controversial – Congress cut its funding more than 50% last year, and the DOE recently announced a pause in the NEPA review for the MPF and in selecting a site to house it. DOE’s pause in that process is indefinite. (Attachment 5) In the face of such large uncertainties, it is premature and wasteful to propose spending taxpayer dollars for design work on a potentially unnecessary and expensive facility. Further, we note that the proposed action to develop new manufacturing techniques for the MPF would involve LLNL making prototype plutonium bomb cores on site – and this is one of the reasons behind the proposal in the Draft SWEIS to increase the administrative limit for plutonium at LLNL from the current 1,540 pounds to 3,300 pounds. This is a dra-</p>

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14/37.01 cont.	<p>matic increase, one fraught with risks, and should not be even be proposed without the most careful consideration and clear justification – both of which are lacking.</p>
15/27.01	<p><u>Integrated Technology Project / Advanced Materials Program (also known as Plutonium Atomic Vapor Laser Isotope Separation or P-AVLIS):</u> The purpose and need for revival of P-AVLIS technology is not detailed in the Draft SWEIS, and its mission is merely mentioned in passing as “Stockpile Stewardship.” The Draft SWEIS leaves open the door for DOE to separate any and all plutonium isotopes at LLNL. While DOE may be desirous of having a new separation technology for plutonium, that does not mean the activity is “needed.” For example, among other options, DOE could limit “hydroshots” using plutonium-242 as an environmental and non-proliferation alternative to developing P-AVLIS technology at LLNL, assuming that stockpiling Plutonium-242 is a driver for the proposed action. As the Draft SWEIS does not even specify what plutonium isotopes will be harvested and for what specific purposes, we are robbed of our ability to fully comment on Purpose and Need or alternatives. Literally, we would have to offer our guess as to the use(s) proposed for P-AVLIS and then comment on and offer alternatives to our own guess. Such a situation falls far short of what is required under NEPA.</p>
	<p>We note too that one use of this technology, if perfected at LLNL, could be to separate out the Plutonium-239 from reactor or fuel grade plutonium, enriching it to weapons grade for use in nuclear bombs. This technology could be used by other countries, or a technically adept sub-national group, for covert production of weapons grade plutonium. The P-AVLIS technology is unique because it is modular by design and therefore could be implemented on a small scale by a potential proliferant in a university lab or other similar location, making it particularly difficult to detect.</p>
	<p>With these facts in mind, the National Academy of Sciences National Research Council criticized the original P-AVLIS proposal, stating in December 1989 that “any decision to proceed should explicitly consider the implications of the technology for nuclear proliferation.” (Attachment 6)</p>
	<p>Here again, such a potentially risky action should not be proposed without the most careful consideration and a nonproliferation analysis – both of which are entirely lacking in the Draft SWEIS.</p>
	<p><b><u>d. The Purpose and Need Should Incorporate the Precautionary Principle</u></b></p>
	<p>The 1998 Wingspread Statement on the Precautionary Principle summarizes it this way:</p>
	<p>“When an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.”</p>
	<p>The Precautionary Principle in essence says that in the face of scientific uncertainty, the decision-maker should err on the side of caution. For example, the precautionary principle was used</p>

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in the California Department of Health Services, Environmental Health Investigation Branch (CDHS-EHIB) report called the: "Proposed Process to Address the Historic Distribution of Sewage Sludge Containing Plutonium Released from the Lawrence Livermore National Laboratory (LLNL)" (November 2002). (Attachment 7)

In the discussion section of the CDHS-EHIB report addressing the proposed process for addressing historic distribution of plutonium contaminated sludge, the report concluded that "[s]ince the nature and extent of the potential health hazards remains uncertain, members [of the Sludge Working Group] supported a process that approaches these issues in a proactive manner and would be based on the "precautionary principle". A key component of the precautionary principle is to take precaution in the face of scientific uncertainty." The report outlined a process for further investigation and community involvement and: "CDHS and the SWG recommend that LLNL/DOE provide funding to Alameda County Department of Health Services to implement a process to address the historic distribution of sludge from LWRP (Livermore Water Reclamation Plant)".

The National Environmental Policy Act is precautionary in two ways: 1) it emphasizes foresight and attention to consequences by requiring an environmental impact assessment for any federally funded project, and 2) it mandates consideration of alternative plans. The SWEIS for LLNL should incorporate all aspects of the Precautionary Principle into its analysis and decision making process by:

16/31.10

- analyzing and choosing alternatives that eliminate possibly harmful actions and offer "clean" technologies that eliminate waste and toxic substances;
- placing the burden of proof on proponents of an activity rather than on victims or potential victims of the activity;
- setting and working toward goals that protect health and the environment; and
- bringing democracy and transparency in decisions affecting health and the environment.

The draft SWEIS should be redrafted to fully incorporate the precautionary principle.

In summary, the Purpose and Need must be redrafted to provide a more consistent statement; one in better keeping with all tenets of U.S. law. The alternatives that flow from the Purpose and Need statement should likewise be redrafted to display a more reasonable range of alternatives -- to minimize environmental impacts and waste of taxpayer dollars as well as avoid duplicative and unnecessary projects within the DOE complex. "Major Decisions", as described in Section 1.5 should be broken into their components and described in detail so that these proposals can be meaningfully evaluated. Finally, DOE should incorporate the precautionary principle throughout.

17/02.01

**II. DOE SHOULD REVISE ITS ALTERNATIVES ANALYSIS TO INCLUDE OTHER, REASONABLE ALTERNATIVES**

18/31.01

02.01

The alternatives analysis in the Draft SWEIS is deficient and is not reflective of the full range of options that must reasonably be considered for LLNL operations now and in the coming decade.

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The alternatives analysis is the "heart" of the EIS (Council on Environmental Quality NEPA Regulations, 1502.14). NEPA requires DOE to "rigorously explore and objectively evaluate all reasonable alternatives" (CEQ NEPA Regulations, 1502.14(a)). DOE must "sharply defin[e] the issues and provid[e] a clear basis for choice among options by the decisionmaker and the public" (CEQ NEPA Regulations, 1502.14).

The Draft SWEIS states that:

"in order to ensure the safety, reliability, and performance of the nuclear weapons stockpile, DOE has determined that it should: construct the NIF and the Terascale Simulation Facility; operate existing facilities such as Building 332 Plutonium Facility..."

18/31.01

02.01

cont.

This is a series of merely conclusory phrases that assert a Livermore Lab laser (the NIF), plutonium facility (Building 332) and Terascale supercomputing facility are all necessary to maintain the U.S. nuclear weapons stockpile. The SWEIS should provide some justifications for such a broad, sweeping claim. The claim is arguable at best, and, in the view of Tri-Valley CAREs and many independent experts -- and also many LLNL and DOE scientists -- absolutely untrue. To be specific, the DOE National Nuclear Security Administration folks have "determined" that it shall do those listed activities; however, they are in no way necessary to ensure the safety, reliability and performance of the nuclear stockpile (setting aside the question of whether that is the appropriate mission). This assertion appears to further and inappropriately constrain the analysis of reasonable, feasible alternatives in the Draft SWEIS.

**a. Need for Analysis of a "No Plutonium Mission" Alternative**

The Secretary of Energy has committed to study the removal of all Category 1 special nuclear material (generally defined as bomb-usable quantities of plutonium and highly enriched uranium) from the Livermore Lab main site due to the vulnerability of these materials to "terror attack" while stored there. The removal of most or all of LLNL's plutonium and the loss of any major plutonium mission for the site must, therefore, be considered as a "reasonable" alternative under NEPA. In fact, it is unreasonable to fail to include it. (Attachment 8)

The Draft SWEIS contains only three "alternatives": the proposed action with 3,300 pounds of plutonium as its storage limit; the no action alternative with the current storage limit of 1,540 pounds of plutonium; and, the reduced operation alternative, which posits the same plutonium storage limit as the no action alternative -- 1,540 pounds. The SWEIS must acknowledge that there is clearly uncertainty (to say the least) as to the "need" for significant quantities of this material at Livermore Lab, and it should restructure the alternatives analysis to provide decision-makers and the public with an opportunity to comment on several alternatives for plutonium at Livermore Lab, including a "no plutonium mission" alternative.

The negative environmental impacts that may be associated with the "no plutonium mission" alternative (e.g., removal of plutonium from the LLNL main site) should be compared to the reductions that will occur in waste generation, waste storage, security vulnerabilities, worker exposure, public exposure, and accidents. Moreover, the analysis should include a careful review of activities at the LLNL plutonium facility that are unnecessary and/or duplicative of activities

10/08.02

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11/08.01

cont.

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11/08.01 CONT.	<p>at other DOE sites. We believe that it is unnecessary to maintain two "full service" plutonium facilities in the nuclear weapons complex and that the plutonium facility at LLNL can and should be closed without increasing the overall plutonium work being conducted at Los Alamos or any other site in the DOE complex. In fact, it is reasonable to reduce the Los Alamos plutonium mission even while LLNL's is eliminated. That this is true is a measure of the bloat and duplication in the nuclear materials activities of the two design labs. Additionally, the new alternatives analysis should outline a credible, open public process for making decisions regarding any proposed removal of the LLNL plutonium to another location.</p>
8/07.01 CONT.	<p><b>b. Need for Analysis of an Enhanced Civilian Science Program Alternative</b></p> <p>The DOE inappropriately rejected conducting any analysis of the very reasonable alternative of transitioning Livermore Lab in whole or in large part to civilian science purposes. This omission must be remedied. In the past, Secretaries of Energy and federal commissions have entertained this option. It is a feasible alternative for the coming decade. Ten years ago, Tri-Valley CAREs undertook a study of how LLNL could be converted to an unclassified civilian science lab using DOE's existing budget lines – and resulting in a vast reduction in environmental impact and a vast increase in community and worker involvement and the democratic conduct of science generally. While some details have changed, due in part to specific programmatic changes at LLNL over the past decade, our study provides a framework and some very relevant criteria for framing the new civilian science alternative in the SWEIS. (Attachment 9)</p> <p><b>III. DOE SHOULD PROVIDE A MORE THOROUGH CUMULATIVE IMPACTS ANALYSIS</b></p> <p>DOE's NEPA Implementing Procedures require SWEIS to include "cumulative impacts of ongoing and reasonable foreseeable future actions at a DOE site" (10 CFR 1021.104). The Council on Environmental Quality stresses, "cumulative effects analysis is essential to effectively managing the consequences of human activities on the environment" ("CEQ Guidance Regarding Cumulative Effects").</p> <p>Cumulative effects result from the proposed action's incremental impacts when these impacts are added to the impacts of other past, present, and reasonably foreseeable future actions regardless of the agency or person undertaking them. Cumulative effects can result from individually minor, but collectively significant actions, that take place over time. These types of impacts involve things such as increased traffic on local roads and air releases to the air basin. If a community is already at maximum carrying capacity for traffic or air pollution, for example, any incremental addition can be cumulatively significant.</p> <p>Tri-Valley CAREs is concerned with the cumulative impacts of LLNL's tritium releases, "takes" of endangered species, beryllium releases, electrical usage, water usage and other known or potential releases of nuclear, chemical and biological materials to the community. The proposed action signifies a major expansion of programs at LLNL and therefore the SWEIS should make a substantial effort to analyze the cumulative impacts of all programs at LLNL in relation to the burdens that the workers and the community already bear.</p>
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19/23.01	<p><b>Increased Tritium / Plutonium Releases:</b> The draft SWEIS omits evaluation of the cumulative effects of a number of its proposed actions. For example, the SWEIS should carefully evaluate the releases of plutonium and tritium from the Livermore Lab and how that may affect the health of the community in light of the current proposals to substantially increase the work with plutonium and tritium at LLNL. It is expected that radioactive materials will be released from projects such as the National Ignition Facility and the Integrated Technology Project; how will these increased releases affect the already contaminated community cumulatively.</p>
20/23.02	<p><b>Malignant Melanoma:</b> The draft SWEIS dismisses the elevated rates of Malignant Melanoma in the Livermore community as being unworthy of any analysis because DOE claims that there has been no link between LLNL operations and the illnesses. However, the SWEIS does acknowledge that LLNL operations will result in cancers in the local community. Regardless of whether the Malignant Melanoma increases can be proven to have resulted from operation of the Livermore Lab, the SWEIS should consider the cumulative impacts of the additional cancer rates and other illnesses on an already vulnerable population. We are attaching a Malignant Melanoma study conducted by the California Department of Health Services, and we ask that you incorporate this as a reference document and analyze it under a revised cumulative impacts analysis in the SWEIS. (Attachment 10)</p>
21/17.04	<p><b>Air Quality:</b> The Air Quality in the San Joaquin Valley (where LLNL Site 300 is located) and in Alameda County (where the LLNL main site and part of Site 300 are located) is some of the worst in the nation. (Attachment 11).</p> <p>The SWEIS should acknowledge this and explain the incremental, cumulative and synergistic impacts of the radioactive, hazardous chemical and other releases from LLNL activities, both current and planned over the coming decade.</p>
22/16.03, 16.02	<p><b>Integration:</b> The draft SWEIS discusses endangered and threatened species in the biological assessment (BA). However that appendix does not discuss how the increased programs at the LLNL main site and at Site 300 will affect these species in detail. It vaguely discusses decommissioning of buildings but does not describe the contents of those buildings and how inevitable leaks will affect species. The BA does not discuss the impacts on different species from radiological and chemical releases. This should be included in the biological assessment. The BA should be discussed in the alternatives analysis and in the cumulative impacts sections to properly integrate the SWEIS.</p>
23/14.01, 25.01	<p>Similarly, the SWEIS does not discuss the seismic concerns throughout the SWEIS nor does it integrate the seismic concerns into the alternatives analysis. This should be included to ensure that all new proposed projects will take into account the hazards that seismic weaknesses will pose toward going forward with the proposed action.</p>
24/09.03	<p><b>Land Use Conflicts:</b> The areas surrounding the LLNL main site and Site 300 are becoming increasingly residential. Industrial areas are being rezoned to residential. The SWEIS</p>
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24/09.03  
cont.

should analyze the appropriateness of continued weapons research, development and manufacturing activities in close proximity to growing suburban communities.

**IV. DOE SHOULD REVIEW HOW ITS WORK WILL IMPACT INTERNATIONAL TREATIES**

The SWEIS does not discuss or outline how LLNL will make good faith efforts to ensure that its work does not overstep the bounds of or otherwise weaken international agreements such as the nuclear Non-Proliferation Treaty (NPT) and the Biological Weapons and Toxin Convention (BWC). The DOE has some history of studying the potential proliferation impacts of its programs, including in NEPA documents. And, it is reasonable and necessary to do so here in the SWEIS. If we want other countries to believe that the U.S. plans to comply with its treaty obligations, then DOE needs to conduct a full and thorough analysis of potential impacts to those obligations in the SWEIS.

**a. Potential Impacts on the Non-Proliferation Treaty Must be Analyzed**

The nuclear Non-Proliferation Treaty, which the U.S. ratified and which entered into force in 1970, states that nuclear weapons states must "pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament..."

It is unacceptable to brush aside a discussion of how DOE will ensure compliance with the NPT in its analysis in the SWEIS, especially with new weapons projects at Livermore Lab planned for the coming decade, including work on: the Robust Nuclear Earth Penetrator; the Advanced Concepts Initiative, including work on very low-yield, more "usable" nuclear weapons; the Plutonium Pit development for the Modern Pit Facility; and Enhanced Test Readiness. These and other programs currently planned / underway at Livermore Lab may very well contradict the NPT and/or weaken or complicate its underlying non-proliferation regime.

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cont.

The New Agenda Coalition, an influential group of signatory states to the Non-Proliferation Treaty, have called upon the nuclear weapons states to stop modernizing their arsenals:

"Any plans or intentions to develop new types of nuclear weapons or rationalization for their use stand in marked contradiction to the NPT, and undermine the international community's efforts towards improving the security of all states." (*Attachment 12*)

Please consider the statement, also attached, "Special Time Statement on Nuclear Disarmament" by Ambassador Luis Alfonso De Alba on behalf of the New Agenda Coalition, New York, 3 May 2004.

The SWEIS should consider the totality of current and proposed activities at LLNL, and examine specific projects in detail, with regard to their impacts on the NPT specifically and non-proliferation objectives in general. The Draft SWEIS with the addition its draft non-proliferation review should be re-circulated to the public for comment.

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**b. Potential Impacts on the Biological and Toxin Weapons Convention Must be Analyzed**

The BWC was ratified by the U.S. in 1975. This treaty requires that all signatories refrain from developing, producing or stockpiling, or otherwise acquiring or attaining biological weapons that have no justification for prophylactic, protective or other peaceful purposes.

Scott Ritter, a former United Nations chief weapons inspector in Iraq, cautioned that placement of advanced bio-agent research facilities inside a secret nuclear weapons lab such as LLNL will raise serious suspicions in the minds of officials of other governments -- because this research is by its nature "dual use." International suspicions may be compounded by other countries' inability to conduct full inspections of LLNL's bio-work due to its collocation within a top-secret nuclear weapons laboratory.

25/01.02

Moreover, developing bio-defense facilities at LLNL may create a precedent that could prompt other nations to model their biological weapons development facilities after the fast growing U.S. complex. A world in which a leading nation is perceived to be secretly exploring the military application of biotechnology (due to the dual-use nature of LLNL's planned research, which would involve aerosolizing and genetically modifying deadly pathogens) would create a situation ripe for proliferation. In fact, housing dangerous bio-warfare agent research within a secret nuclear lab that holds the infrastructure to produce agents for a theater scale war (e.g., a large capacity fermenter), presents a dangerous posture to the international community and could complicate the negotiation of verification and enforcement protocols to the BWC as well as potentially catalyze a new biological arms race.

The SWEIS must include a nonproliferation review that analyzes the potential impact that conducting advanced bio-warfare agent research at LLNL may have on U.S. and international efforts to stem biological warfare research and weaponry in general and on the BWC in particular.

**V. COMMENTS ON SPECIFIC PROGRAMS**

**a. DOE's National Ignition Facility SWEIS / SPEIS Analysis Fails to Comply with NEPA; DOE Should Not Move Forward With the Project**

26/26.01

Appendix M of the Draft SWEIS outlines plans to add plutonium, highly-enriched uranium, lithium hydride and other new materials to experiments in the National Ignition Facility (NIF) mega-laser. Appendix M makes clear that some of the planned plutonium experiments, for example, will involve fissioning the material in the NIF. This appendix purports to serve as a SPEIS but fails to adequately describe the programmatic impacts of these proposed experiments.

Under this proposed action, the NIF will no longer be limited to fusion research and the fusion component of a nuclear weapon explosion, but, instead, will be used to conduct a broad suite of both fusion and fission experiments. Adding fissile and fissionable material to NIF experiments provides a new utility to its use for nuclear weapons design and may contribute to the vertical and horizontal proliferation of nuclear weapons. The proposed action, in essence, creates a

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26/26.01 cont.	wholly new and vastly different mission for the NIF. This was pointed out at the public hearing in Livermore by Dr. Ray Kidder, a retired senior scientist at LLNL and founder of its laser division.
27/26.03	<u>Environmental Concerns:</u> Plutonium and other fissile material would be used in NIF. Fission products would be created during experiments in the NIF. Workers would be exposed, for example, during the process of inserting and removing a special target chamber for each plutonium fission experiment in the NIF. Inadequate attention is paid in the document to worker exposures. Appendix M discloses, too, that DOE is unsure of how it will get the special target chamber into and out of the main NIF target chamber each time.
28/26.07	Similarly, potential waste management issues are too summarily dismissed. For example, the entire special target chamber would need to be disposed of after a single plutonium fission shot, according to Appendix M. Plans are to dispose of the special target chambers at the Nevada Test Site. However, the document does not analyze whether there may be problems that would prevent the chambers from being accepted at the test site for burial (e.g., if a chamber is contaminated also with a state or RCRA-listed hazardous constituent and becomes a "mixed waste").
29/26.03	Lithium hydride presents hazards to workers and the environment as well, and these are not fully analyzed in the Draft SWEIS. The Environmental Protection Agency rates it as "extremely hazardous." Lithium hydride can ignite on contact with air. Human sweat can set it off.  Finally, according to the Draft SWEIS, the proposed new experiments in NIF will mean that gas and semi-volatile fission products would be released to the environment. The document should describe these gases and semi-volatile fission products.
30/26.02	<u>SPEIS fails to analyze program-wide impacts:</u> The SPEIS or Supplemental Programmatic Environmental Impact Statement for Experiments with new materials in the National Ignition Facility does not meet the criteria for an adequate programmatic NEPA analysis.  The Department of Energy published the Record of Decision (ROD) (61 FR 68014) for the Stockpile Stewardship and Management (SSM), Programmatic Environmental Impact Statement (PEIS) and indicated that the Department would construct and operate the National Ignition Facility at the Lawrence Livermore National Laboratory as a key component of the nation's nuclear weapons stockpile.  A lawsuit, brought by a coalition of environmental groups including Tri-Valley CAREs, challenging the adequacy of the SSM PEIS, alleged that there were DOE proposals to conduct experiments at the NIF using hazardous and radioactive materials not studied in the SSM PEIS. The court acknowledged that the document would have to be amended if these experiments became foreseeable. In a Memorandum Opinion and Order issued by the U.S. District Court for the District of Columbia on August 19, 1998, in NRDC v. Richardson, Civ. No. 97-936 (SS) (D.D.C.), the Court ordered the DOE to, no later than

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30/26.02 cont.	January 1, 2004, either (1) determine that experiments using plutonium, fissile materials, and fissionable materials will not be conducted in the NIF, or (2) prepare a Supplemental SSM PEIS analyzing the reasonably foreseeable environmental impact of such experiments.  We note that DOE is out of compliance with the timeframe imposed by the Court Order. Further, it is inappropriate to simply incorporate the SPEIS into the SWEIS because it defeats the purpose of a programmatic review and it undermines the intent of the court's 1998 order. A programmatic review, unlike a project-specific EIS, "presents an opportunity for a federal agency to evaluate the potential cumulative impacts of the reasonably foreseeable actions under the program..." 40 C.F.R. 1502.4(c). The program in this case is the Stockpile Stewardship and Management Program, and the court order requires that DOE evaluate the new experiments on NIF in the context of that entire DOE SSM complex rather than in the context of LLNL alone.
31/26.01	The new experiments in NIF will pose new programmatic challenges and questions in respect to obtaining feed materials, transportation of nuclear materials, purpose and need, and disposal of waste within the DOE complex. Further the new experiments in the NIF should be analyzed for reasonable alternatives -- not just LLNL wide -- but within the DOE complex-wide SSM program.  We also note the complete lack of any cost estimate for the proposed suite of new NIF experiments. Nor is there any cost estimate included for the required equipment or for the needed modifications to NIF's existing equipment and design. Appendix M mentions but does not analyze the extent of modification that would be required in order to conduct the experiments outlined in the proposed action. For example, Appendix M briefly mentions that a special target chamber will be needed for each time certain of the plutonium shots (the fission shots) occurs in NIF. Appendix M reveals that DOE is not yet certain how these special target chambers will be placed inside the main target chamber. Appendix M further mentions (but does not analyze) that to accommodate this series of new, special target chambers, modifications will need to be made to NIF's design. What are the total costs of all of the changes and modifications that would be necessitated by the proposed action alternative? What are the uncertainties? The document should include that information and be re-circulated for comment.  Moreover, the programmatic priority -- and trade-offs due to cost and other factors -- within the SSM complex for these experiments should be analyzed. Finally, the SPEIS should analyze how the cumulative impacts of this proposal will impact all sites within the SSM program.  <u>The Purpose and Need For the New Experiments is Inadequate:</u> Although the SWEIS does provide a basic description of some of the proposed new experiments in the NIF, it does not discuss the purpose and need for these experiments and whether these experiments may, intentionally or by default, change the fundamental mission of the National Ignition Facility. We echo the comments of Ray Kidder, former senior scientist at Livermore Lab and founder of its laser directorate, who commented that these new materials

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31/26.01  
cont.

will provide NIF with substantially more usefulness for weapons design activities. We are concerned that the impact of NIF's "mission change" or "mission creep" has yet to be evaluated within the purpose and need for the NIF.

Past Proliferation Study is now Moot and New Study is Needed: In a December 19, 1995 report titled, The National Ignition Facility (NIF) and the Issue of Nonproliferation, the DOE stated that: "Efforts to achieve ICF [inertial confinement fusion] capsule ignition and burn at the NIF will not make use of any fissile material [i.e., plutonium or highly enriched uranium]. And, it also stated that "only a few individual weapon – relevant processes can be studied at NIF in each experiment [thus limiting its weapons development utility]". To underscore that plutonium and other new materials would not be used in NIF experiments, the DOE report goes on to say that "a proliferator's intention to attempt to use NIF data for nuclear weapons purposes might be evidenced by:

- the use of certain materials such as fissile material or certain fusion fuels at special conditions of temperature and density" (Attachment 13)

However, the SWEIS proposes to use fissile materials like plutonium in the NIF. Moreover, in this context, we ask whether the term "certain fusion fuels" as used in the DOE nonproliferation review includes certain experiments with lithium deuteride, which is now also proposed for use in the NIF?

Ray Kidder has stated that not only are these newly proposed experiments "not necessary to maintain the current stockpile" but that "fusion-explosion experiments with these fissile materials could be important to the design of new nuclear weapons of a type different from any in the current stockpile."

32/01.01

Key assumptions of the past proliferation review are invalid and a new review is warranted and necessary. DOE must conduct a new nonproliferation analysis covering the proposed use of plutonium, highly enriched uranium, lithium hydride and other new materials in NIF experiments before moving forward with the proposed action. That analysis must be made part of the NEPA document and re-circulated in draft for comment by decision-makers and the public.

33/26.06

Neutron Spectrometer: In Appendix M, the NIF suddenly acquires a neutron spectrometer. The Draft SWEIS describes the neutron spectrometer only briefly and by stating that it will be installed in a concrete shaft excavated to a point 52 feet below the surface. The neutron spectrometer appears to be a major undertaking, yet it is not fully described. The SWEIS must include a complete description. Further, the neutron spectrometer's purpose and need seems (once again) to be simply that DOE desires it. Finally, the Draft SWEIS says that that its construction will begin in 2008 and "when completed," the neutron spectrometer "would become part of the NIF operational facility." Does this mean that DOE is planning to add a neutron spectrometer but is NOT including its projected costs as part of the NIF budget? Please explain. The SWEIS should include the full cost of the neutron spectrometer as well as a description of potential environmental impacts.

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34/26.01

Additional Questions Posed By NIF: The NIF is plagued by technical problems and is not likely to achieve ignition at all. This was further evidenced by the DOE's FY05 budget request to Congress that proposed an additional delay in NIF ignition experiments -- to 2014. Also the cost has skyrocketed -- NIF went to Congress with an estimated \$1 billion dollar price tag. In 2000 the estimate had risen to \$4.2 billion, according to the General Accounting Office. And, now?

Finally, explanations are lacking in the Draft SWEIS as to (1) the likelihood (or lack thereof) that NIF will meet its scientific goal of inertial confinement fusion (ICF) ignition in laboratory experiments, (2) how NIF with (or without) ICF ignition is directly required for maintenance of the existing nuclear arsenal, and (3) whether NIF is fully compliant with Article 1 of the Comprehensive Test Ban Treaty.

The SWEIS process must take a fresh look at the entire National Ignition Facility program. A thorough review of NIF's mission, environmental risks, proliferation impacts, life-cycle costs and ability to achieve its stated scientific goal of ignition is called for -- not the new and fundamentally different set of experiments proposed in the Draft SWEIS.

**b. DOE Should Provide More Thorough Review of the Biology and Biotechnology Research Program in the SWEIS, Including the Bio-Safety Level-3 Facility**

35/02.02

The Purpose and Need statement in the SWEIS does not even acknowledge the very recent and significant growth of the Livermore Lab's Biology and Biotechnology Research Program (BBRP) and the controversy regarding whether LLNL is the best suited entity for going forward with a higher risk set of programs, such as operating a Bio-Safety Level-3 (BSL-3) facility, in the BBRP. The prior NEPA review for the BSL-3 facility is currently stalled in litigation and therefore it is inappropriate to consider the BSL-3 part of the "no action" alternative when final approval has not been received on the BSL-3. The Draft SWEIS also does not make an effort to describe how these experiments will comply with the Biological and Toxic Weapons Convention, or whether they may weaken that treaty regime and/or complicate the enforcement and verification protocols.

36/01.02

The Draft SWEIS fails to give an in-depth explanation of proposed actions with regard to biological weapons related research. NEPA requires DOE to discuss major Federal actions that may significantly affect the environment (CEQ NEPA Regulations, 1502.3). This includes both "new and continuing activities" (CEQ NEPA Regulations, 1508.18). Under DOE's NEPA Implementing Procedures, "action" refers to a "project, plan, or policy" (CEQ NEPA Regulations, 10 CFR 1021.104). Tri-Valley CAREs asserts that the BBRP, including the BSL-3 are connected actions. So while it is true that the NEPA review done for the BSL-3 is woefully inadequate on its face, it is also true that the SWEIS must include a review of the entire BBRP as well as the BSL-3 facility -- the BSL-3 cannot be merely considered in isolation.

35/02.02  
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"Connected actions" are those that cannot proceed unless other actions are taken previously or simultaneously, or are interdependent parts of a larger action and depend on the larger action for justification. "Cumulative actions" are those that when

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viewed with other actions proposed by the agency have cumulatively significant impacts and therefore should be discussed in the same EIS. "Similar actions" are those that when viewed with other reasonably foreseeable or proposed agency actions have similarities that provide a basis for evaluating their environmental impacts together, such as common timing or geography. (See 40 CFR 1508.25(a).)

DOE must therefore perform a detailed explanation of all current and proposed BBRP activities beyond that which is in the Draft SWEIS. As it stands, the SWEIS only dedicates two paragraphs to its chemical and biological plans for the next decade, and has almost no discussion of the particular effects of those projects. In order to comply with NEPA, DOE must discuss the specific environmental impacts and increased hazards posed by the Biology and Biotechnology Research Program.

Tri-Valley CAREs maintains the position that BSL-3 level advanced bio-warfare agent research should not be conducted inside LLNL for several reasons. First off, it poses yet another catastrophic hazard to the community, where homes and apartments extend right up to the fence line of the Livermore Lab main site where the BBRP activities are housed. Second, the Secretary of Energy has publicly spoken out about the security deficiencies at Livermore Lab. The bio-warfare agent storage poses the same kinds of security (e.g., "terror attack" or sabotage) concerns. Moreover, we note that the BSL-3 is planned as a portable building in an area with less security than the Superblock (where the plutonium is stored). Therefore, the security risks may be greater. This should be fully analyzed in the SWEIS. Please consider the information provided by former LLNL security police officer Mathew Zipoli in this regard as well as with respect to security issues more broadly. (Attachment 14)

35/02.02  
CONT.

Purpose and Need of the BBRP Must be Analyzed Programmatically in the SWEIS: A clearer explanation should be included in the SWEIS of what current biological programs are taking place at the lab, how they may grow in the future, what these programs will entail and what types of environmental impacts may result from normal operations and accidental releases. The Lab's Institutional Bio-safety Committee has acknowledged that:

"There is a cascade of microbiological applications coming from many new parts of LLNL...causing a rethinking of several functions at the Laboratory, including the role of the IBC, the need for an integrating review system for microbiological research, and revisions to the Lab's NEPA approval from DOE." (Meeting minutes of April 11, 2001, Attachment 15)

Because of the growth of these programs, a dedicated portion of the SWEIS should focus on the BBRP, including a detailed description of current and proposed activities, and its hazards and impacts. All of the BSL labs that compose the BBRP share some environmental consequences and resource commitments such as work space, employees, waste streams, transportation hazards and related concerns. With shared personnel and shared infrastructure come shared challenges regarding training, equipment, transportation, disposal, best practices, emergency planning and safeguards. These challenges should be analyzed in an integrated way as a separate, identifiable section of the SWEIS.

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A Nonproliferation Analysis Must be Included in the SWEIS: Following the Bush Administration's discontinuation of the negotiations on verification and enforcement measures needed to detect and prevent violations of the Biological and Toxin Weapons Convention, it is an internationally sensitive climate regarding biological weapons research.

By expanding U.S. biological weapon agent research into secret, highly-classified nuclear weapons labs, the DOE could both set a precedent for other countries to do the same and instill in other countries a suspicion that the U.S. is developing biological weapons, novel (e.g., genetically modified) bio-war agents and/or new biological weapon capabilities. We note as well that the LLNL main site also houses an Environmental Microbial Biotechnology Facility, a fermenter that could be made capable of growing enough bio-weapon agent for a theater scale war. (Attachment 16)

36/01.02  
CONT.

If this same work were taking place inside military installations in other countries, say Iran or Iraq, for example, the U.S. would proclaim it as a "smoking gun" and proof positive for bio-weapons possession. That U.S. perception would remain true even if the level of funding, the size of the facilities and the sophistication of the research were all demonstrably lower than what is planned in the U.S. at LLNL. Moreover, a country may act on its perceptions -- as the U.S. invasion of Iraq dramatically shows. Therefore, the SWEIS must consider that a U.S. biowarfare agent research program at Livermore Lab may look no less provocative to much of the rest of the world. And, that numerous countries may act based on those perceptions. A boost in their own nations' bio-warfare agent research may well be one result.

We are concerned that the increased U.S. BBRP program at LLNL and its BSL-3 could encourage others to "do as we do, not as we say" -- and therefore a non-proliferation review is warranted must be completed as part of the SWEIS process.

Former UN weapons inspector Scott Ritter and University of California at Davis professor and microbiologist Mark Wheelis have described some of the hazards associated with advanced bio-warfare research inside the Livermore Lab. Both Ritter and Wheelis are experts in their field and should provide new ideas about what concerns should be included in the nonproliferation review in the SWEIS. (Attachment 17)

The Problem of Dual-Use and LLNL's Advanced Bio-Warfare Agent Research: The research with biological weapon agents at Livermore Lab could, by definition, be used for defensive goals (e.g., to develop a biodetector) and for offensive goals (e.g., to weaponize an agent). That is one reason why it is so critical to have safeguards and verification measures in place to ensure that the work does not violate or weaken the BWC.

The National Academy of Sciences report "Biotechnology Research in an Age of Terrorism: Confronting the 'Dual Use' Dilemma" - 2003, states that there are currently no guidelines to address "the potential for misuse of the tools, technology, or knowledge

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36/01.02  
cont.

base of this research enterprise for offensive military or terrorist purposes." (Attachment 18)

Please consider this report and include it (as with our other attachments) as one of the reference documents for the SWEIS. With poor oversight, the DOE could be paving the way for the next generation of super-strains of deadly bio-agents. Please consider the information provided by Edward Hammond and Professor and author Susan Wright, as well as the aforementioned Ritter and Wheelis, when you evaluate the risks associated with this program. (Attachment 19)

The SWEIS should also evaluate the purpose and goals of the Institutional Biosafety Committee (IBC), an important committee that serves as the "safety net" to ensure that LLNL does not conduct unsafe or inappropriate research. It is further supposed to serve as the community's "bridge" to bio-experiments at LLNL. Tri-Valley CAREs has been very disappointed in the lack of information available to the public on these programs in general and the IBC in particular. The IBC is intended to ensure that the biological research is transparent and that Livermore Lab is held accountable for its work. It cannot carry out that mission while meeting in secret -- in a classified area of the LLNL main site -- and without any prior public notice.

37/25.04

Accidents and Other Issues: Among the key issues that must be analyzed in the SWEIS are -- past accidents in the bio-programs including but not limited to the anthrax that may have gone out with the trash, needlestick received by an employee in the hazardous waste area when a bio-program waste container was improperly marked, and the mislabeling of transportation containers. These and other incidents should be evaluated in the SWEIS. (Attachment 20)

The SWEIS must also consider the potential impact of earthquakes on the BSL-3 and other facilities that are part of the BBRP, the vulnerability of HEPA filters and their translucency in the tenth-micron range, and the proximity of large numbers of workers and community members. (Marion Fulk, staff scientist, LLNL, retired and Matthew McKinzie, physicist, NRDC -- Attachment 21)

**c. DOE Should Phase Out LLNL Plutonium Activities, Not Increase the Storage Limit**

38/33.01

The proposed action would increase the administrative limit for plutonium at LLNL from 1,540 to 3,300 pounds. Tri-Valley CAREs believes that increasing the storage limit for plutonium at LLNL is irresponsible, dangerous and headed in the wrong direction. LLNL's main site and its plutonium facility are located in the midst of the densely populated San Francisco Bay Area, and 7 million people reside within 50 miles of LLNL. Moreover, the LLNL main site is a very compact and crowded 1.3 square mile facility with buildings "cheek to jowl" and nearly 10,000 employees and subcontractors on site. Residential neighborhoods are built right up to the LLNL main site fence line. The City of Livermore has grown substantially since LLNL was founded in 1952, thereby increasing the risks from a release to a larger and more diverse population.

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cont.

Fires, spills, filter failures, leaks and criticality accidents with radioactive materials have all occurred at LLNL. There have been more than 30 serious, publicly reported accidents involving radioactive materials at LLNL, including plutonium.

Plutonium-laced liquids have been poured on the ground. Plutonium accidents in Building 332 have contaminated workers and at least one accident blew out a HEPA filter plenum. Plutonium has been routinely and accidentally released to the sewer system, and plutonium has been found at greater than background levels in public parks and near a school. Plutonium has also been found in an off-site air monitor. Plutonium is one of the most dangerous substances known, and weapons-grade plutonium (Pu-239) has a radioactive half-life of about 24,000 years.

We assert that the physical and chemical properties of plutonium make it difficult to store safely. If plutonium is packed too closely together, or if plutonium parts of a sufficient size come together accidentally, a criticality, or runaway nuclear chain reaction, will occur. We note in this context that the LLNL plutonium facility has been shut down at least twice in the past ten years due to multiple criticality safety violations. And, we note that a criticality accident with highly enriched uranium has occurred at the LLNL main site.

Further, plutonium chips and shavings from manufacturing processes at LLNL can spontaneously ignite upon contact with air. And, storage containers can burst from heat and pressure over time. This can be exacerbated by unsafe canning procedures. In this regard, we note that the LLNL plutonium facility was cited for bulging cans of plutonium as well as other problems during a DOE inspection. The LLNL operational record and safety problems involving plutonium have been given too little attention in the Draft SWEIS.

In addition, we offer the following specific comments and questions on the proposed action to raise the plutonium storage limit at LLNL:

Purpose and Need: the Draft SWEIS vaguely asserts that "Stockpile Stewardship" necessitates proposed increase in the administrative limit for plutonium at LLNL. In 1999, DOE did a supplement analysis on the prior LLNL SWEIS/EIR and decided that the existing 1,540 pound administrative limit for plutonium would continue. The Stockpile Stewardship program was well underway at that time. Therefore, we find it difficult to understand that only 5 years since that decision, DOE proposes to more than double the administrative limit. Please cite the specific changes in the purpose and need for the program that were not anticipated in 1999, and how much plutonium would be required for each. Please, further, cite specific alternatives for each of the changes.

Alternatives Analysis: The Draft SWEIS fails to include within the Reduced Operation Alternative, an alternative that reduces the administrative limit for plutonium below the current 1,540 pounds. On April 27, 2004, approximately 450 people attended public hearings in Livermore on the Draft SWEIS. An overwhelming majority of the speakers expressed concern about the handling and storage of special nuclear materials in general and, specifically, plutonium at LLNL. That same day, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations held a hearing on the

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10/08.02 cont.	<p>security of plutonium and highly enriched uranium at DOE sites, with a focus on the vulnerability of nuclear material storage at LLNL.</p> <p>Though the Draft SWEIS argues that it is not reasonably foreseeable to de-inventory plutonium and other special nuclear materials at LLNL, in light of the recent General Accounting Office report on the Design Basis Threat, the Project on Government oversight report (Attachment 22) and the testimony at congressional hearings urging removal of these materials, we believe the Draft SWEIS should provide a full evaluation of this alternative and be re-circulated for comment.</p> <p>NEPA holds that the analysis of reasonably foreseeable alternatives is the heart of the law. The Draft SWEIS should have included an alternative that studied a reduction of this deadly material at LLNL and, as outlined above in the alternatives section of our comment, we feel that the document is legally insufficient for failing to do so.</p>
39/30.01, 30.02	<p><u>Security / Terrorism / Sabotage Concerns:</u> As noted, the General Accounting Office just released a report that describes serious concerns they have about the ability of Livermore (and some other DOE sites) to adequately protect stored plutonium from the threats posed by terrorism or sabotage. The Secretary of Energy Spencer Abraham echoed those concerns on May 7, 2004, when he delivered a speech that included the vulnerabilities in securing nuclear materials at LLNL. Secretary Abraham made a commitment to "consider whether certain essential work performed at Livermore could be moved so as to remove the special nuclear materials that are there." Tri-Valley CAREs believes that the Livermore Lab main site is not an appropriate place to house large quantities of plutonium, in part, because the site is uniquely vulnerable and cannot be properly defended in the case of a determined terror attack or sabotage. The Draft SWEIS should include and respond to these concerns. Further, as we noted in our comment on alternatives analysis, the SWEIS should undertake a careful consideration of LLNL plutonium activities and programs that may be unnecessary or are duplicative of activities performed elsewhere in the complex.</p> <p>Another serious deficiency is that the Draft SWEIS does not contain an unclassified security analysis. This omission robs the public and most decision makers of the opportunity to comment on, question or point out needed improvements in the analysis, if warranted. Nor can the public and most decision makers comment on whether we think the outcomes are acceptable to us. Further, we are unable to look at the differences that may exist in consequence between alternatives. Security studies should be accompanied by declassified or unclassified versions for the SWEIS that release as much information to the public as possible. Tri-Valley CAREs agrees that it may be appropriate to retain classification of certain, specific details (e.g., an in-depth analysis of how to best overcome security at LLNL), but it is absolutely inappropriate and untenable for DOE to omit all security information from the SWEIS.</p>
40/23.01, 37.01	<p><u>Environmental Hazards:</u> The SWEIS should include an analysis of past plutonium releases at DOE facilities including Livermore Lab and Rocky Flats - especially in light of DOE's proposed action to manufacture prototype plutonium pits at LLNL in support of</p>

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40/23.01, 37.01	<p>technology development for a Modern Pit Facility. And, in light of Livermore's long history of plutonium storage problems, including but not limited to the bulging cans and criticality violations.</p>
cont.	<p>LLNL has been cited for HEPA filter problems in Building 332, including for having old HEPAs in ill-fitting housings on gloveboxes. Please discuss whether the HEPA filters on the gloveboxes in Building 332 remain in the ill-fitting housings -- or have they all been changed? If so, when? LLNL has been cited for keeping HEPA filters in place long beyond the recommended 6-year time frame (in some cases for a quarter-century or more in Building 332). In 1999, at the urging of Tri-Valley CAREs and the Defense Nuclear Facilities Safety Board, LLNL changed the main filter banks on Building 332, but it is unclear if filters that were internal to the building (e.g., on gloveboxes) were changed. How old is the oldest HEPA filter currently in use?</p>
41/23.02	<p>LLNL has been cited for a range of plutonium storage problems, including but not limited to criticality safety violations (Attachment 23). Please indicate the forms in which the plutonium will be stored, the amounts for the various forms (under the proposed action and baseline scenarios) and the types of containers in which it will be stored. Please indicate how long these containers will be stored and please provide a summary of the final disposition strategy for the plutonium.</p>
42/33.01	<p>The primary plutonium building was first built in 1961, and the latest major addition was built in 1977. Hence the facility will be 50 years old during the term of SWEIS. Because of its age and the safety infrastructure built into the building, vulnerabilities such as the ventilation system and electrical system must be considered carefully. Although the plutonium facility is not a nuclear reactor, in the nuclear power industry reactors undergo a rigorous review after they have been operating for forty years and design upgrades must be considered. Similarly, the DOE should conduct a rigorous review of the LLNL plutonium facility and recommend significant design upgrades, if warranted. This information should be included in the SWEIS.</p>
40/23.01, 37.01	<p><u>Safety Features / Accident Response Capability:</u> According to a report issued by the Defense Nuclear Facilities Safety Board (DNFSB), the accident analysis and bases for calculating consequences used in the Draft SWEIS may be deficient. In a March 17, 2004 report, the DNFSB wrote that staff had reviewed LLNL's accident modeling and found its key assumptions highly questionable. (Attachment 24)</p>
43/25.07	<p>The DNFSB determined that more radiation was likely to escape from the LLNL plutonium facility in an accident than was calculated by the model. Page 3 of the DNFSB report states that the LLNL calculation of only 5% leakage (Leak Path Factor) of the radiation from a plutonium fire is "unrealistic and probably underestimates the extent of a release of unfiltered radioactive material from the facility." The same 5% Leak Path Factor is utilized in the Draft SWEIS. Moreover, the inappropriate Leak Path Factor was just one of three criticisms DNFSB had of the model used to calculate accident consequences. Based on the DNFSB criticism, the modeling in the Draft SWEIS must be redone and the document re-circulated for comment.</p>

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We would further note that the head of the DOE National Nuclear Security Administration, Linton Brooks wrote in a May 14, 2004 letter to DNFSB that DOE would undertake a review of the model and the 5% Leak Path Factor, an admission that DOE may agree with the DNFSB that the model as currently used may substantially underestimate the consequence of an accident.

The modeling deficiencies are part of a larger problem identified by the DNFSB. The LLNL's proposed safety basis for Building 332 (the plutonium facility) contains "serious deficiencies," according to the Board. The DNFSB chairman, John Conway, sent the March 17, 2004 report and a follow up letter to the DOE National Nuclear Security Administration head, Linton Brooks on April 12, 2004. In his letter, Conway summarizes the DNFSB findings and states: "Of particular concern to the Board is a new approach adopted by LLNL to allow the unfiltered releases of radioactive materials from the facility during certain accident scenarios... there do not appear to be any safety or operational benefits to be gained from this approach."

The letter goes on to say that, "Portions of this ventilation system [for the plutonium facility], along with several other safety-class systems, have been downgraded from their high reliability and existing operational safety functions in the proposed safety basis."

Therefore, we ask that DOE recalculate the accident scenarios and consequences used in the SWEIS in a manner that addresses the concerns and comments expressed by the DNFSB in its March 17, 2004 report and Chairman Conway's April 12, 2004 letter. The Draft SWEIS should then be reissued and re-circulated to permit outside, independent analysis by decision makers and the public of any new or changed modeling assumptions, calculations and/or outcomes.

We would also like the SWEIS to describe how integral Livermore Lab reliance on air monitors / emergency generators and negative airflow is? In this context, LLNL should include in the SWEIS information about the October 2003 plutonium accident that resulted in a dozen lab employees potentially being exposed to airborne plutonium because glovebox seals, an emergency generator, an alarm system and negative airflow system all failed simultaneously. A case study should be included in the SWEIS describing how all of these things could have failed at once and describing how these types of failures will not happen again. (Attachment 25).

42/33.01  
cont.

**No Disposition Path:** The Draft SWEIS states that a part of the reason for proposing to increase the administrative limit for plutonium at LLNL is that "no disposition path" currently exists. It is Tri-Valley CAREs contention that LLNL should not procure more plutonium when there is no way to dispose of it. Also, please describe any initiatives that DOE is undertaking to locate a repository for plutonium. Does DOE, for example, plan to seek to further amend the permit for WIPP to allow more types of wastes from LLNL? What are the potential risks associated with different disposition pathways? What are the differences, if any, between the Plutonium Disposition PEIS and the DOE's current

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42/33.01  
cont.

plans? Please describe the disposition pathways under consideration at present for plutonium wastes at LLNL.

**d. DOE Should Decrease the Storage and "At Risk" Limits for Tritium, Not Increase Them**

The proposed action would raise the administrative limit for tritium storage at LLNL from 30 grams to 35 grams. Further, it would increase the "at risk" limit (i.e., the amount that could be used in a single room/process at any given time) nearly 10-fold, from 3.5 grams to 30 grams. Tritium is a radioactive form of hydrogen. The amount of tritium released into the environment from LLNL has always been proportional to the level of tritium activity at the site. Increasing LLNL's tritium activity will mean increased exposures for workers and the public. The Draft SWEIS admits that radiation exposures will go up due to the proposed action; however, the predictions in the Draft SWEIS are too optimistic and the contamination and exposure levels that would result from the proposed action are likely to be much more severe.

Tri-Valley CAREs has cataloged many discharges of tritium in the past from LLNL. Cumulatively, LLNL has released between 750,000 and 1,000,000 curies of tritium into the surrounding environment since 1960. The levels of tritium have been found to be elevated in rainwater on site at LLNL and in the directly surrounding community, in the wine grapes grown in the valley and in the biomass of other plants locally.

A sampling of annual tritium releases to the environment as reported by LLNL shows the following:

17.02,	1986	1,128 curies
18.01,	1987	2,634 curies
16.01	1988	3,978 curies
	1989	2,949 curies
	1990	1,283 curies
	1991	>1,000 curies
	1992	177 curies
	1993	137 curies
	1994	137 curies

In 1989, when LLNL sampled Livermore Valley wines it found that the tritium concentration in our valley wines was four times greater than the tritium in other California wines. In 1990, in part due to concerns voiced by Tri-Valley CAREs regarding LLNL's tritium contamination, Livermore Lab realigned and substantially reduced its tritium use and inventory. In 1991, LLNL stopped filling the test bomb components with tritium on site. In 1992, the Nuclear Testing Moratorium Act terminated full-scale nuclear testing altogether. Tritium activities at LLNL declined -- and so did the releases. There is a direct correlation between the decreases in tritium activity and the amounts released to the environment. The downward trend of tritium releases represents a move in the right direction for LLNL. The proposed action to increase the administrative limit and, most especially, to raise the at risk limit to nearly ten times the current limit would be a substantial move in the wrong direction.

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<p>44/34.01, 17.02, 18.01, 16.01</p>	<p>The SWEIS should catalog this history of releases, information about how much tritium is in the local environment, and provide an analysis of how LLNL proposes to ensure that releases do not occur in the future. Tritium is a gas, is not captured by HEPA filters, is only partially captured by other mechanisms, diffuses through almost anything, and will, operating histories show, invariably escape when used under high pressures. Again, it is our analysis, based on our study of tritium use at LLNL and other sites, that increased activity will lead to increased levels of tritium in the environment.</p> <p>The accidental releases documented at LLNL have been the result of not one but many factors, ranging from equipment failure to employee error. There is nothing to suggest that increases in tritium use at LLNL will not result in similar future accidents.</p> <p>In 1965 and 1973, about 650,000 curies of tritium were released through the stacks of the tritium facility (Building 331) at the LLNL main site. In 1991, a DOE Report of the Task Group on Operation of DOE Tritium Facilities listed the following accidents occurring between 1986 and 1991:</p> <ul style="list-style-type: none"> <li>125 curies, released 12/15/86 due to a failed pump and cryogenic vessel breach</li> <li>198 curies, released 4/14/87 due to an equipment failure and operator error</li> <li>145 curies, released 1/19/88 unknown cause or stack monitor malfunction</li> <li>138 curies, released 1/25/88 unknown cause or stack monitor malfunction</li> <li>653 curies, released 5/15/88 due to unexpected presence of tritium in gases being vented</li> <li>120 curies, released 8/1/88 unknown cause or stack monitor malfunction</li> <li>112 curies, released 2/28/89 unknown cause or stack monitor malfunction</li> <li>329 curies, released 8/22/89 due to improper pressure relief of container</li> <li>112 curies, released 10/31/89 due to mistaken belief a palladium bed contained only deuterium and (non-radioactive) hydrogen</li> <li>144 curies, released 4/2/91 due to improper preparation of a reservoir</li> </ul> <p>The DOE task force further states that management failures at LLNL were the direct cause of the accidental release of tritium on 4/2/91 and the resultant radiological exposure of facility personnel. (Attachment 26)</p> <p>In addition to airborne releases, the SWEIS should also discuss the tritium in waste at LLNL and in releases to the sewage, soil, surface and (eventually) ground water. The SWEIS should also look at alternatives that would reduce the amount of tritium on site, rather than increasing it. Further, the SWEIS should consider the case of the neighboring Sandia National Laboratory, Livermore Site. Sandia Livermore has terminated all of its tritium activities and de-inventoried the tritium at the site. This is an alternative that LLNL should analyze in the SWEIS.</p> <p><u>On site manufacture of tritium targets for NIF:</u> The proposed action in the Draft SWEIS includes the manufacture and filling of tritium targets for the NIF on site at the LLNL main site. The plan to produce fusion targets on site is one of two activities that will necessitate an increase in the "at risk" limit for tritium at LLNL from 3.5 grams to 30 grams, according to the Draft SWEIS.</p>
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<p>45/23.02, 34.01</p> <p>44/34.01, 17.02, 18.01, 16.01</p> <p>46/26.04</p> <p>47/39.01</p> <p>48/01.01</p>	<p>Tri-Valley CAREs strongly objects to this proposed action. As mentioned, tritium is a radioactive form of hydrogen and can easily escape both during routine operations and during accident scenarios. Tritium targets should NOT be manufactured in such a heavily populated area. When released into the environment, tritium combines to make water -- called tritiated water or HTO -- significantly increasing its biological toxicity by 25,000 times according to the National Academy of Sciences BEIR V report.</p> <p>Tritiated water has been shown to induce significant decreases in relative weights of brain, testes, and ovaries, (estimated at 3 rads per day), when exposure began at the time of the mother's conception. Even lower exposures (0.003 rads per day and 0.03 rads per day) have been implicated in the induction of behavioral damage, according to the National Academy of Sciences BEIR III report. Further, tritium can become bound to organic matter when released to the environment. Research conducted by Lowry Dobson at LLNL on the biological effects of tritium revealed that there was no level studied below which biological damage could not be found. (Attachment 27)</p> <p>Tri-Valley CAREs believes that the limits for tritium should be reduced, rather than increased, at LLNL due to its biological toxicity and the fact the on site and off site environments around LLNL have already been contaminated.</p> <p>When the DOE originally conducted an Environmental Impact Statement for NIF as part of its Programmatic EIS for Stockpile Stewardship and Management, that analysis neither anticipated nor studied the manufacture of tritium targets on-site at LLNL. Conversely, it did include an analysis covering the receipt and inspection of targets fabricated at other sites (SSM PEIS, September 1996). Moreover, at the time, LLNL said publicly that it would not consider fabrication of tritium targets on site because of the associated emissions and the proximity of a large, nearby population. Why does DOE now believe that LLNL is the appropriate location to manufacture the targets? The Draft SWEIS is silent on this question. We request that it be fully analyzed and the document re-circulated for comment.</p> <p><b><u>e. DOE Should Not Undertake Proposed, New Support Activities to Enhanced U.S. Readiness to Resume Full-Scale Nuclear Testing</u></b></p> <p><u>Description of Proposed Action:</u> This activity should be described with some detail in the SWEIS. The SWEIS does state that the increased tritium limits will, in part, be due to this activity. The SWEIS should describe this program so that the public can evaluate the hazards and risks inherent in this activity, suggest alternatives when available and evaluate the need for this activity at all. It is impossible to evaluate the Purpose and Need for this activity when it is not clearly described in the SWEIS.</p> <p><u>Proliferation Risks:</u> The document explains that LLNL is likely to develop diagnostics to enhance the U.S.' nuclear test readiness level. Last year \$24.89 million was requested so that DOE could decrease the amount of time it needed to prepare and conduct a full-scale nuclear test. Congress, after much debate, approved the amount, but instructed DOE to</p>
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48/01.01 cont.

keep the U.S. nuclear test readiness at its current level of 24 months. Again, this year DOE has requested \$30 million to create an 18-month readiness level. This 21.4 percent increase over last year comes after repeated testimony by DOE officials as to the safety and reliability of the U.S. nuclear arsenal. The only "need" for resuming full-scale nuclear testing would be to try out (proof test) a new weapons design. This "enhanced readiness" work is unnecessary and it sends the wrong message to the international community; that the U.S. is expending money and resources in order to return to full-scale underground nuclear testing.

The U.S. is a signatory to the Comprehensive Test Ban Treaty (CTBT) and in 2000, the U.S. recommitted itself to ratifying the CTBT at the nuclear Non-Proliferation Treaty Review Conference. Conducting this activity at Livermore Lab undermines these obligations. This proposed activity should be analyzed in detail and a nonproliferation review included in the SWEIS.

**f. DOE Should Not Build a Prototype Plutonium Pit and Pit Manufacturing Technology for the Modern Pit Facility**

DOE/NNSA, according to the Draft SWEIS, continues to rely on LLNL in isolation to meet stated Stockpile Stewardship Program mission objectives: "These objectives include campaigns relating to pit manufacturing and certification." An explanation is needed to explain the relationship between stockpile stewardship and the pit manufacturing and technology development activities to be undertaken by LLNL. This explanation should include but not be limited to the fact that the Modern Pit Facility is intended for the production of new-design pits, that is bomb cores for weapon types not currently in the nuclear weapons stockpile -- an activity that Tri-Valley CAREs believes is far, far outside of any legitimate boundary for actual stewardship of the existing arsenal.

The SWEIS also needs to describe this project in more detail. Without a clear description of this program, it is very difficult for the public to comment on the hazards posed by this fabrication / technology development and propose less environmental hazardous alternatives. The SWEIS should include a review of what went wrong with pit development at Rocky Flats that resulted in such drastic contamination and how LLNL plans to avoid those "pitfalls".

Moreover, Los Alamos is planning to certify its first plutonium replacement pits for the arsenal this year. Again, the SWEIS should provide a full justification for why it is "necessary" for LLNL to expend resources on a plutonium pit manufacturing process when one to provide replacement pits for the arsenal is already underway at Los Alamos.

**g. DOE Should Not Continue New Nuclear Weapons Development at LLNL**

50/02.01 The SWEIS does not describe the new nuclear weapons that are being developed at Livermore Lab. A clearer explanation should be included in the SWEIS of what this process will entail and what types of environmental impacts will result from this activity. We know from other sources that LLNL is re-designing the B83 to become a Robust Nuclear Earth Penetrator. We know that LLNL has taken over modification activities for a Los Alamos designed nuclear weapon, the

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50/02.01 cont.

W80, and that a series of "modifications" is planned (up through modification 3 and option 3A, according to DOE documents). We know that LLNL is involved in "advanced concepts" work on so-called "mini-nukes" and other novel weapons. This is a small sample of the weapons research, design, development and testing activities planned over the next ten years. These activities have enormous environmental and policy implications and should be detailed in a full and unclassified manner in the SWEIS. Again, these new and modified designs are controversial in the public arena and in Congress -- DOE must justify their purpose and need in the Draft SWEIS. The desire of DOE and some weaponeers inside LLNL to engage in this activity does not constitute a "need" under NEPA.

**h. Energetic Materials Processing Center is Insufficiently Analyzed in the Draft SWEIS**

51/04.02 The proposed Energetic Materials Processing Center (EMPC) to be located at LLNL Site 300, would include the construction of a new 40,000 square-foot processing facility and four magazines: two capable of storing 1,000 pounds of high explosives and two capable of storing 500 pounds of explosives (Section 3.3.8). Please indicate what type of explosive material is anticipated. Additionally, groundwater emanating from the current high explosives processing area (Building 812) is contaminated with RDX, perchlorate, nitrate, and TCE. Please explain how LLNL plans to manage waste disposal so that this will not occur again. The purpose and need for this action is also not discussed in any detail. This is a major new undertaking, and these deficiencies in the discussion and analysis of the EMPC must be remedied in the SWEIS.

**i. DOE Should Cancel Plans to Resurrect Plutonium Atomic Vapor Laser Isotope Separation (i.e., the Advanced Materials Program / Integrated Technology Project)**

52/06.01, 27.01 Tri-Valley CAREs believes that LLNL should, at a minimum, adopt the reduced operations alternative and stop all activities with the AMP / ITP because it is expensive, unnecessary, hazardous to workers and the community and poses very significant proliferation risks.

The Draft SWEIS, in Appendix N, reveals plans to heat plutonium and shoot multiple laser beams through the vapor to separate out desired isotopes. This project is environmentally hazardous. It will involve a feedstock of 220 pounds of plutonium per year, using a powdered oxide form that can easily escape to the environment. Moreover, the process to turn the oxides into a metal feedstock poses additional risks not disclosed or analyzed in the Draft SWEIS. Public radiation doses will likely occur from airborne radiation emanating from all aspects of this process. Some of this radiation will vent through the Building 332 (the Plutonium Facility) stacks. (page N-22).

53/27.01, 33.01 This project was originally pursued by DOE in the 1980's, and called Plutonium Atomic Vapor Laser Isotope Separation (P-AVLIS). The original P-AVLIS proposal involved an engineering demonstration system, built at LLNL and a Special Isotope Separation plant to be constructed at the DOE's Idaho site. The P-AVLIS program's funding was cut by Congress and it was canceled by DOE more than a decade ago -- before any plutonium was used in the demonstration system at LLNL. Moreover, the public was promised a full environmental Impact Statement would be conducted before any plutonium was run in the engineering demonstration system at LLNL.

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53/27.01, 33.01 CONT.	<p>The outcome of the original P-AVLIS proposal was that the entire program was cut amid serious proliferation concerns, outcry over the lack of need, and questions about its potential environmental consequences.</p> <p>The equipment that was to have been used in the P-AVLIS program at LLNL is now proposed for use as the newly-revived plutonium "Integrated Technology Project." The Integrated Technology Project will involve a 3-fold increase in the "at risk" limit for plutonium at LLNL, from 44 pounds in one room to 132 pounds. We note that the original P-AVLIS project did not propose increasing the "at risk" limit for plutonium at LLNL.</p>
54/33.01	<p>The Draft SWEIS neither adequately considers the risks of raising the at risk limit for plutonium nor explains the "need" to do so. This represents a very serious change at LLNL and the paucity of the review in the Draft SWEIS must be remedied.</p>
53/27.01, 33.01, CONT.	<p><u>Need for legitimate NEPA review of AMP</u> : One of the National Environmental Policy Act's six fundamental objectives is to enhance public participation in government planning and decision-making. NEPA creates new and innovative ways for the public to be involved in government activities and requires the federal government to respond to concerns about environmental problems. (Council on Environmental Quality 1997).</p> <p>Tri-Valley CAREs was shocked to discover by reading the Draft SWEIS that plutonium had already been vaporized and isotopes separated in the AMP program -- years after the program was supposedly cancelled and without benefit of the EIS promised by DOE. In fact, plutonium was run in the project without any publicly circulated NEPA review whatsoever. The Draft SWEIS disingenuously refers to a past NEPA review for which no part was circulated to the public. Its existence was not even disclosed at the time. Even now, the Draft SWEIS does not indicate the level of NEPA review this decision received. Was it a categorical exclusion? A memo to file? Public involvement is one of NEPA's fundamental principles and DOE's failure to circulate this NEPA document violates both the spirit and letter of NEPA.</p> <p>Tri-Valley CAREs attempted to obtain the NEPA review for the AMP after-the-fact since the Draft SWEIS includes the AMP in the no action alternative and proposes to eliminate the AMP in the reduced operations alternative. We felt it would be valuable for us to include the review so that we could adequately comment on the alternatives in the SWEIS.</p> <p>We informally requested the AMP NEPA review from DOE/NNSA SWEIS document manager Tom Grim in February/March of 2004. Mr. Grim took two weeks to determine that the review should not be released to us, citing potential proprietary interests. Tri-Valley CAREs filed a formal <i>Freedom Of Information Act</i> (5 U.S.C. 552) request on March 17<sup>th</sup>, 2004, seeking the "National Environmental Policy Act Review of the Advanced Materials Program, Buildings 161, 332, 335: June 20, 2002." and other related documents. On April 5, 2004, we were granted a fee waiver relating to this request. That is the last correspondence that we have received in relation to this request.</p>
55/31.06	

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55/31.06 CONT.	<p>NEPA specifically includes provisions that encourage reviewers to utilize FOIA to enable them to comment intelligently on NEPA documents: Agencies shall "make environmental impact statements, the comments received, and any underlying documents available to the public pursuant to the provisions of [FOIA]." 40 CFR 1506.6(f). FOIA is designed to provide documents in an expedited fashion. We attempted to use FOIA, but no documents have been provided to us in response to our request in the past 2.5 months. This has made it nearly impossible to evaluate the alternatives analysis. DOE should release this document publicly so that the alternatives can be meaningfully evaluated. Moreover, the public has the right to comment on whether the scope of the project reviewed and the attendant level and depth of the NEPA review undertaken by DOE in making this decision was sufficient to protect workers, the public and the environment.</p>
56/01.01, 31.04	<p><u>Need for Nonproliferation Review</u>: Our President has told us that he/we must invade Iraq because of the threat of developing nuclear weapons -- yet this technology, when fully developed, will make it easier for any would-be proliferant nation to separate weapons grade plutonium from spent nuclear fuel rods or other reactor grade plutonium forms. This poses a significant worldwide proliferation threat. It is inconceivable to Tri-Valley CAREs that this genuine proliferation threat has not resulted in even a nonproliferation review in the Draft SWEIS, while an undocumented, disputed and largely-conjured threat has led us into war.</p> <p>Construction of a facility like this in the U.S. sets a dangerous precedent for non-nuclear weapons states to construct an AVLIS process of their own. According to a report from the National Academy of Sciences -- and a letter signed by 31 U.S. disarmament experts in 1989 -- designing and implementing this technology could lead to the spread of AVLIS technology to other countries and groups serving as a bridge between civilian nuclear power byproducts and weapons grade materials. This would in turn pose new verification problems for ensuring that the nuclear power programs of emerging and advanced industrial countries are utilized for exclusively peaceful purposes. The SWEIS must address this very serious proliferation concern and be re-circulated for comment.</p>
57/27.02	<p>Moreover, we note that this program will have negative impacts on workers and the community that go far beyond what DOE analyzed in the Draft SWEIS. This analysis, including the accident analysis, must be redone.</p> <p>Finally, we wonder if the DOE has an alternative site for the plutonium Atomic Vapor Laser isotope Separation (a.k.a. ITP) program if it is decided that it will not be located at LLNL? If so, where? And, have those environmental risks been assessed and the communities surrounding the alternate site informed and brought into the decision making process? If so, please describe both the risks and outreach that DOE has undertaken to encourage public participation.</p>
	<p><b><u>i. Advanced Simulation and Computing Initiative and its Terascale Project Require an Expanded Review in the SWEIS</u></b></p>
	<p>The Terascale facility's purpose is to provide computing and simulation support to DOE's Advanced Simulation and computing Initiative (ASCI), a key element of SSM, according to DOE.</p>

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	<p>The SSM program maintains the readiness, safety and reliability of the U.S. nuclear weapons stockpile.</p> <p>Terascale is a 268,000 sq. ft facility. It will consume electricity and water in amounts that “are substantial relative to the total LLNL site consumption.”</p>
58/21.01	<p>Electrical energy consumption will be substantial; it will increase by 30% above anticipated electrical energy consumption by all other users at the LLNL main site in 2005. Terascale will have electrical needs equal to 1.3% of all consumption in Alameda County. The SWEIS should discuss how these electrical needs will cumulatively impact the environment in the Livermore Area and Alameda County in general. Further, if this facility will primarily be used at night (when the electrical grid is least burdened) then how will it impact the endangered species that forage and travel at night?</p>
59/18.03	<p>Water consumption will also be substantial. Water Consumption will increase by 30 million gal/year. This represents an overall increase in LLNL consumption by 12%. We live in an area where water is a scarce and precious resource.</p> <p>The cumulative impacts of this water use and electrical use should be analyzed and an alternative that proposes to discontinue operations of the Terascale Facility should be evaluated. This is especially true because similar computing operations are already in progress at other DOE sites. As we noted LLNL, Los Alamos Lab and Sandia Lab all have massive supercomputing initiatives underway in support of Stockpile Stewardship. We note that water and electricity are major issues in both California and New Mexico. Some choices between facilities need to be made.</p>
	<p><b>VI. OVERALL CONCERNS</b></p> <p><b>a. DOE’s Seismicity Analysis is Flawed</b></p>
60/14.01	<p>Livermore and the San Francisco Bay Area are very seismically active areas, as are Tracy and the Central Valley region.</p> <p>The Draft SWEIS acknowledges that there are two faults within a kilometer of the Livermore Lab main site. Both of these faults, the Greenville and Los Positas faults are shrouded in uncertainty. The Las Positas Fault Zone is situated less than 200 feet from the LLNL main site boundary. It is not clear the level of hazard these faults pose or when they will strike.</p>
61/14.03	<p>LLNL main site has numerous buildings that pose significant earthquake hazards. The earthquake analysis was out-of-date as of the time that the Draft SWEIS was published. Two buildings were undergoing renovations that should have already been completed at the time the Draft SWEIS was published, but no update on the status of these buildings was included.</p> <p>The Draft SWEIS states that 108 buildings are being evaluated – but it doesn’t specify which 108 buildings. The public needs that information in order to evaluate whether it believes certain projects should be conducted in those buildings.</p>
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	<p>Does the Draft SWEIS require that the buildings are still operational after an earthquake? What standard does it use?</p>
61/14.03 CONT.	<p>After the 1980 earthquake on the Greenville Fault (which had been listed as geologically inactive until that quake), a 120-meter discontinuous crack opened up on site at LLNL. Tri-Valley CAREs believes that earthquake scenarios must include the potential for substantial ground cracks as well as shaking. The information provided by Robert Curry should be considered in the SWEIS both with reference to the bio-warfare agent research facility and more broadly. (Attachment 28)</p>
	<p><b>b. DOE’s Environmental Justice Analysis is Incomplete and Understates the Problems</b></p>
	<p>President Clinton’s Executive Order 12898 (59 FR 7629) mandated that federal agencies consider the potentially disproportionate effect of their activities on minority and low-income communities.</p>
62/15.02	<p>Although Livermore is generally of a higher socioeconomic status, the SWEIS should contain a more detailed demographic analysis of the communities surrounding the LLNL main site instead of a cursory evaluation of the number of jobs that will be created. For example, the two major apartment complexes on East Avenue that are closest to the LLNL main site (Stony Creek and Livermore Gardens, located about one-quarter mile from LLNL) are heavily populated by low-income and minority individuals. Livermore has approximately 20,000 racial minorities, and nearly 4,000 people live in poverty (<a href="http://www.bavareacensus.ca.gov/cities/Livermore.htm">www.bavareacensus.ca.gov/cities/Livermore.htm</a>).</p> <p>Any releases or accidents at the LLNL main site would have a greater impact on those communities directly surrounding LLNL, particularly the lower income and minority populations that are clustered in the apartments near LLNL. The SWEIS should identify who those communities are to determine whether the DOE is in compliance with environmental justice mandates.</p> <p>The Draft SWEIS should also consider whether community perceptions about hazards posed by the LLNL main site could affect the property values of land surrounding LLNL. If this is the case, then lower-income individuals may be disproportionately affected by hazardous and radioactive releases from LLNL. There have been prior incidents, such as the plutonium found in Big Trees Park in 1995 and 1998, that have unsettled public confidence in the value of land near the Livermore Lab main site. (<a href="http://www.wslfweb.org/docs/newsins99.pdf">www.wslfweb.org/docs/newsins99.pdf</a>). Future events like this one could have a larger impact on those living nearby.</p> <p>California law requires mandatory disclosure of any substances, materials, or products that may be an environmental hazard such as, but not limited to, asbestos, formaldehyde, radon gas, lead-based paint, mold, fuel, or chemical storage tanks, and contaminated soil or water on the subject property (California Statutory form 110.22). Property owners are required to report any contamination that is known or could have been discovered by reasonable inquiry. Detecting radioactive substances on a property is an expensive and involved process. Tri-Valley CAREs has become aware of property owners disclosure of potential contamination from Livermore Lab</p>
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62/15.02 CONT.	<p>during the transfer of real property in the City of Livermore. In the cases of real or simply perceived contamination, we believe this should be discussed in the Draft SWEIS, as it could impact property values and the economic health of the community—extending as far out as the 50-mile radius affected environment.</p> <p>With regard to Site 300, about 30,000 racial minorities live in Tracy, over 40% of its population. 26% are Latino, 8% are Asian, 5% are African-American, 1% are Pacific Islander, and 1% are Native American (<a href="http://www.ci.tracy.ca.us/about/demographics/">http://www.ci.tracy.ca.us/about/demographics/</a>). The same concerns discussed above are even more relevant to Site 300, given Tracy's substantially higher minority population. The Draft SWEIS should offer a more detailed consideration of how property values, safety perceptions, and actual health and safety risks impact poor and minority communities in the vicinity of Site 300.</p>
63/31.09	<p><b><u>c. DOE's Categorical Exclusions are Unsubstantiated in the Draft SWEIS, and May Be Inappropriately Applied</u></b></p> <p>The Draft SWEIS offers no explanations for why DOE's categorical exclusions apply. DOE NEPA regulations state that categorical exclusions "do not individually or cumulatively have a significant effect on the human environment" (10 CFR 1021.410). Please provide a reason why each exclusion should be immune from NEPA review, and why each does not have a significant effect on the environment.</p>
64/38.01	<p>Regarding Section 3.2.5 (Container Security Testing Facility), DOE determined that this facility was categorically excluded from further NEPA review. We believe this facility should be described more thoroughly in the SWEIS. This facility would use "actual or simulated threat materials that could be illicitly introduced to the U.S. for the purposes of terrorism." (Section 3.2.5). The CSTF will be a Category 3 Material Balance Area, a Radiological Facility, and a Low-Hazard Chemical Facility. The use of such materials could have a substantial impact on the environment, which we believe requires NEPA review. Please address this issue.</p>
65/22.01	<p>Regarding Section 3.2.9 (Waste Isolation Pilot Plant Mobile Vendor), DOE determined that this activity was categorically excluded from further NEPA review. What document or decision process was involved in making the determination that a categorical exclusion should apply? Conceivably, the Mobile Vendor could engage in a range of activities related to the task of characterizing TRU and mixed TRU wastes that may have a significant impact on worker and public health and the environment. The decision regarding how to ship TRU waste is very important to environmental considerations, and may require NEPA review. (See SWEIS Section 4.13.5, and our comment section on TRUPACT-II and TRUPACT-III casks.)</p>
63/31.09 CONT.	<p>Regarding Section 3.2.7 (Central Cafeteria Replacement), DOE determined that this facility was categorically excluded from further NEPA review. What document or decision process was involved in making the determination that a categorical exclusion should apply? This facility would be located near the DRB, which is an area with a substantial population of red-legged tree frogs, a Federally listed threatened species (61 FR 25813 et seq.). (Section 3.2.7; see also Appendix E.2.1.5.3, and E-52.) This could have a significant impact on the environment and might be subject to NEPA review. The cafeteria should also be tested for TCE vapor intrusion.</p>

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63/31.09 CONT.	<p>Regarding Section 3.2.8 (International Security Research Facility), DOE determined that this facility was categorically excluded from further NEPA review. What document or decision process was involved in making the determination that a categorical exclusion should apply? The construction of this facility could impact the environment, and may require NEPA review.</p> <p>Further, the Tritium Facility Modernization Project, which is barely mentioned in the Draft SWEIS, is a major undertaking that will have a significant impact on the environment, yet it is being carried out under a categorical exclusion to NEPA. Tri-Valley CAREs only learned of this project because the categorical exclusion is a referenced document in the Draft SWEIS. We were shocked to learn that a categorical exclusion was given to a line-item, \$12 million project that will take 6 years to complete (2003 - 2009) and will, at a minimum, cause a projected 7-fold increase in the tritium emissions from Building 331 (from 30 curies in 2001 to 210 curies/yr in 2009 when the project is complete).</p> <p>These 210 curies/yr emissions appear to be program related, and do not seem to include additional tritium emissions that may be associated with other activities that are also part of the categorical exclusion. Is this a correct reading?</p> <p>The categorical exclusion covers multiple activities, any one of which could require a higher level NEPA review, let alone all of them taken together. For example, the Tritium Facility Modernization Project's categorical exclusion involves "structural, functional and operational changes." These include but are not limited to: removal and relocation of tritium operations in 7 different labs in Building 331; removal of contaminated equipment including gloveboxes, hoods, piping, pumps and cable trays; construction of "large user devices" and possibly a whole new 6,000 square foot building; and, installation and use of a plethora of new equipment including cryotransporters and user stations capable of pressurizing tritium gas up to 25 ksi. The categorical exclusion also includes a short note stating that tritium handling would increase from 3.5 grams/yr in 2002 to 25 grams/year in 2009.</p> <p>Tri-Valley CAREs notes a past incident where LLNL staff placed a piece of equipment out into the open area next to Building 331. LLNL staff thought the piece of equipment was only a little contaminated with tritium. It off-gassed tritium to such an extent that when LLNL staff went out and conducted routine monitoring of the rainfall for their annual environmental monitoring report, they found that the concentration of tritium in rain water was 147,000 picocuries per liter. The state and federal maximum contaminant level for drinking water is 20,000 picocuries per liter. 147,000 picocuries/liter is 7 times the maximum contaminant level, and is essentially radioactive waste falling out of the sky. This, from one single piece of equipment. The categorical exclusion covers a smorgasbord of contaminated equipment as well as the piping and ductwork in Building 331, which is known to be very heavily contaminated and could off-gas an unknown but potentially large amount of tritium.</p> <p>Some of the changes outlined in the categorical exclusion for the Tritium Facility Modernization project appear to be related to proposed actions in the Draft SWEIS. Examples include: the manufacture of tritium targets on site for NIF; development of a diagnostic to enhance readiness to conduct a full-scale nuclear test (involving tritium); and, new experiments proposed for the</p>
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63/31.09  
cont.

NIF. The latter would include the construction of special target chambers in Building 331 that would then be transported to NIF and, following the shot, returned to Building 331 for further diagnostic analysis and preparation for final transport to the Nevada Test Site for burial.

Please discuss the relationship between the activities that are part of this categorical exclusion and the proposed actions in the Draft SWEIS.

The categorical exclusion for the Tritium Facility Modernization project is date stamped March 20, 2003. The approval is date stamped March 25, 2003. Has any funding been obtained to begin carrying out its listed activities?

Please explain the term line-item in reference to the statement that the "line-item-funded" budget is \$12 million. Is \$12 million the total budget for all activities listed in the categorical exclusion? If not, please provide the total estimated budget to carry out all activities listed in the categorical exclusion from its inception in 2003 to its completion.

Have any of the activities listed in the categorical exclusion begun? Please describe which activities, if any, have begun and whether any of the activities are complete. Please provide an itemized list and timeline for carrying out all of the activities that are part of the Tritium Facility Modernization project.

**d. DOE Must Revise the Accident Analysis Used in the Draft SWEIS**

Tri-Valley CAREs has concluded that the accident analysis in the Draft SWEIS is deficient, and considerably underestimates the consequences of a major accident to the public and the workers. In fact, it does not provide the community or the agencies that are going to make a decision. There are several reasons for this:

66/25.08 Airplane Analysis: The airplane crash scenario assumes that only a small single engine aircraft would be involved in an accident. The analysis only included airfields within 22 miles, thereby excluding commercial jet liners originating from San Jose, Oakland, San Francisco International Airport, Sacramento, and military aircraft originating from Moffett Airfield. These airports are all within 50 miles of LLNL. The airplane accident scenario needs to be recalculated, assuming that a commercial airliner crashes into one of the buildings. Assuming a large plane crash may dominate bounding accident scenarios for all populations. Under unfavorable meteorological conditions, the probability of an air crash would increase. This is not reflected in the accident scenarios.

67/25.05 Non-Cancer Effects: Only latent cancer fatalities are reported. In fact, if any of the accidents were to occur, there would be other severe effects that would result, including non-lethal cancers and a number of diseases. Because of the long-lived isotopes involved in some scenarios, (e.g., highly enriched uranium and plutonium) the residual risks of disease from an accident would last centuries. The accident analysis does not appear to consider this. This is also discussed in our comments on health and safety.

68/25.06 Economic Costs Need to be Included: There is no analysis of the cost of an accident that spreads radiation outside of the Lab. This is vital in weighing the alternatives. The Liv-

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68/25.06  
cont.

ermore Lab is situated in a residential area, and Site 300 in an area that is rapidly becoming more residential. Both sites are bounded by rich agricultural regions. A major accident could have enormous economic consequences, not only for rebuilding the parts of LLNL that were involved, but cleaning up areas outside the Lab, relocating residents, lost agricultural capability, and monitoring health of affected residents. For comparison sake (there really is no good comparison) the accident at Three Mile Island has cost over \$1 billion for cleanup. In addition, the reactor (costing hundreds of million dollars), which had only been used for approximately one month, was entirely written off.

Accident Frequencies: Derivation of accident frequencies, except for the small airplane crashes, is not provided. Often these frequencies are given as a range with no explanation. Because accident frequency is so important in measuring the potential consequences of alternatives, we strongly believe that this variable should be explained in detail for all scenarios. We request that a section be added to the Appendix detailing how accident frequencies are derived.

Earthquake Scenario: While we note that the earthquake scenario assumes a 1 g ground surface acceleration (as opposed to 0.6 g used in the Environmental Assessment for the BSL-3 facility), we also note that a 1991 study by Geomatrix Consultants concluded that spectral acceleration of up to 2.5 g is expected in structures experiencing only 2 percent damping over Type Two Soil during a ground acceleration of 0.9 g. Therefore we are concerned that even the g-force number in the SWEIS may still underestimate the destruction that may occur at the Livermore Lab. In addition, 108 Buildings at LLNL have potential seismic difficulties. 12% of buildings at LLNL do not comply with federal seismic standards. 22 have unacceptable seismic risks. 41 need "detailed evaluation" to determine the seismic risk level, including buildings where they conduct genetic modification of bio-agents.

69/25.07 DNFSB's Critique of LLNL Accident Modeling: Historically, the Defense Nuclear Facilities Safety Board (DNFSB) has criticized LLNL's nuclear operations, particularly (but not exclusively) regarding the plutonium facility (Building 332). As mentioned, most recently the DNFSB (April 2004) strongly criticized LLNL's accident analysis. In part, the report states "LLNL is pursuing a new approach to accident analysis in that potentially harmful consequences to the public are mitigated by the structural boundaries of Building 332, which is assumed to reduce the unmitigated release of radioactive materials. In the past, Building 332 relied on a safety-class active ventilation system to ensure that the radioactive materials released during an accident, such as a fire, would be forced through a series of high-efficiency particulate air (HEPA) filters before being released to the outside environment. Under LLNL's new approach, it is assumed that the building's leak paths would physically reduce the release of unfiltered contaminated air from the facility."

Furthermore, a previous letter on March 25, 2003 stated that the "inadequacies included postulated accident scenarios for which unmitigated consequences had been evaluated to exceed the off-site evaluation guidelines, but for which no safety-class controls had been identified."

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69/25.07 cont.	<p>In the bounding accident for Building 332, (unfiltered room fire), certain assumptions are made -- such as an airborne release fraction (i.e., the amount that would disperse into the air as a result of this accident scenario) (ARF) of only 0.00005 and the Leak Path Factor (LPF) of only 0.05. We believe that a more conservative approach is to assume the leak path factor is between 0.5 and 1. (In its 2004 letter to NNSA, the DNFSB also criticized the LPF calculation, noting that the "calculated LPF of 5 percent is unrealistic and probably underestimates the extent of a release from unfiltered radioactive material from this facility.") We also question how the ARF was derived. These variables are fundamental in deriving health effects, and each should be clearly stated for each accident, and all assumptions should be clearly stated. Moreover, the accident scenarios, when redone with less optimistic assumptions, should be re-circulated in draft form for public comment.</p>
70/25.01	<p><u>Emergency Generator Failures:</u> Buildings 331 (tritium facility) and 332 (plutonium facility) have emergency diesel generators (EDGs) to provide power in the event of an interruption in power supply. These systems would supply pressure for water, ventilation, and actuate other emergency equipment. During the 1990's, the EDGs at B-332 failed routine tests five times. The accident scenarios should not presume that the EDGs will be working, both to run the ventilation system and other emergency equipment. Therefore, all accident scenarios should assume a loss of total power. This affects the fire suppression system, alarms, and security doors. A credible scenario of an unfiltered fire with no power should be analyzed. (Note that the DNFSB criticized LLNL for downgrading the safety status of the emergency power supply (EPS) at Building 332 in its April 11, 2002 letter, stating that i.e., "The staff observed at LLNL a fundamental lack of understanding of system vulnerabilities in the Building 332 EPS").</p>
71/30.01, 30.02	<p><u>Terrorist Threats / Sabotage:</u> None of the intentional acts that could cause a release (e.g., terrorist attack, theft, sabotage, disgruntled employee) are analyzed in this document. Instead, DOE states that this is a separate analysis and is classified. While we understand that there is some need to classify some information regarding terrorist attacks and security, we are very concerned that all scenarios were not covered and that inadequate assumptions were made. The Draft SWEIS also should discuss the range of scenarios that analyzed, and provide at least a qualitative consequence analysis. This method is recommended by the DOE Office of NEPA and Policy Compliance, <u>Recommendations for Analyzing Accidents Under NEPA, Final Guidance</u>, July 2002.</p>
72/25.01	<p><u>Need for New Bounding Accident:</u> The unfiltered room fire is the bounding accident for Building 332. Yet, a hydrogen deflagration accident has nearly five times the source term, and a greater estimated probability. Please conduct a detailed analysis of this scenario.</p> <p>Moreover, the current bounding accident scenario for Building 332 is the unfiltered fire in one room, with a material at risk of 60 kg of plutonium. However, the administrative levels allow 60 kg in each of two rooms. The detailed analysis of a plane crash does not provide the material at risk number, but we would think that it would be 120 kg of pluto-</p>

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72/25.01 CONT.	<p>nium. If this is correct, would the plane crash become the bounding scenario? Please evaluate.</p> <p><u>HEPA Filter Failure:</u> HEPA filters are assumed to mitigate most accident scenario releases. However, during a fire, both the filter and the seal are prone to failure, as the filter is made of fiberglass paper and would lose its filtering capability when wet (fire suppression) and would be severely damaged by high temperatures. (See also the attached declaration of Marion Fulk, staff scientist, LLNL, retired).</p> <p><u>Fire with Highly Enriched Uranium:</u> A fire in Building 334 involving highly enriched uranium is not analyzed in detail. Because 100 grams are the source term, we recommend performing a detailed analysis of this accident scenario.</p>
73/25.06	<p><u>Environmental Effects:</u> The Draft SWEIS fails to document and take account of environmental effects in its accident analysis. This is recommended by U.S. DOE Office of NEPA Policy and Compliance, <u>Recommendations for Analyzing Accidents Under NEPA</u>, July 2002, p. 3. This omission must be remedied.</p> <p><u>Incorporate Project Lifetime into Probability Calculations:</u> The U.S. DOE Office of NEPA Policy and Compliance, <u>Recommendations for Analyzing Accidents Under NEPA</u> (p.9) recommends that the analysis should consider probability of an accident occurring over the lifetime of the project. Project duration does not appear to be part of the description of projects evaluated. We recommend that project duration be identified and factored into the accident analysis.</p>
74/25.05	<p><u>Effects of Increased Radioactive / Biological Materials in Accident Scenario:</u> Would the increases in the amount of plutonium storage and plutonium and tritium material at risk limits pose any additional concern regarding the BSL-3 proposal? For example, if the worst-case accident occurred at Building 332 or Building 625, please detail how hazardous materials or biological agents would be secured while personnel in other buildings were being evacuated.</p>
75/17.07	<p><u>Serious Wildfire at Site 300:</u> For Site 300, it does not appear that a massive wildfire has been analyzed. This would be a fire that could not be controlled by the fire fighting force. This scenario has been brought up in public comments on the Site 300 Site Wide Record of Decision. Please include an analysis of this possibility in the SWEIS.</p>
76/30.01	<p><b>e. <u>The Emergency Response and Security Section Needs Additional Information</u></b></p> <p>There is little information on how the Superblock (Buildings 332 and 331) will be guarded in case of internal fire, biological release from bio-terrorism facility and/or other security-related scenarios. We are very concerned that security systems and personnel are not adequate to prevent intentional releases. The SWEIS needs more detail about the security force, its training, and what types of equipment are available to it. Moreover, the SWEIS must discuss the pattern of security deficiencies at LLNL that have been investigated and reported over the last several years by the</p>

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76/30.01 | DOE Office of the Inspector General, the General Accounting Office and other agencies. (Attachment 29)  
CONT. | Please explain how radioactive materials, especially plutonium and highly enriched uranium, will be secure when transported and used outside of the Superblock. Several buildings (e.g., NIF, Building 239) will have sufficient quantities of these materials to require a discussion of security outside the Superblock.

77/29.01 | Regarding Table 4.4.1.1-1 Summary of Emergency response 1999 -2002, there are between 60 and 70 calls regarding hazardous materials each year. This indicates potential problems. Please categorize the types of incidents involved and how they were addressed.  
**f. Transportation Analysis Must be Expanded**

78/20.01 | LLNL ships approximately 4000 containers per year of hazardous and radiological waste to approximately 50 different treatment, storage or disposal facilities across the U.S. in about 500 shipments of waste per year. The Draft SWEIS does not provide detailed information on these shipments and we believe these significant shipments of waste should be reviewed in more detail.

79/36.01 | The Draft SWEIS should disclose what roads are used for the radioactive material shipment and outline how proposed transuranic waste shipments will travel from Berkeley to Livermore. How often will shipments occur and will local residents be notified when they will occur? Will shipments occur during peak traffic hours or during night time off-peak hours? Are the shipments secured from a terrorist attack? How will these shipments be protected as they travel through densely populated urban areas?  
**g. The DOE Must Address the Risks of Shifting from Double-Walled Trupact-II Containers to Single-Walled Trupact-III Containers.**

80/20.05 | On April 30, 2002, NRC issued a proposed rule that would eliminate 10 CFR 71.63(b)'s double containment requirement for transuranic (TRU) waste shipments. A March 15, 2004 Department of Energy news release indicates that DOE is considering using a new single-walled waste transportation package for shipments to the Waste Isolation Pilot Plant. PacTech Corporation has sought approval of the new single-walled Transuranic Package Transporter Model III (TRU-PACT-III). DOE submitted a Class 3 Permit Modification Request (WIPP HWFP #NM4890139088-TSDF) seeking "container management improvements" at WIPP. TRUPACT-III containers are mentioned several times in this request.

NEPA regulations require agencies to address and evaluate reasonably foreseeable adverse effects on the environment, even when there is incomplete or unavailable information (40 CFR 1502.22). DOE's NEPA Implementing Procedures require that the DOE "identify and assess the individual and cumulative impacts of ...reasonably foreseeable future actions at a DOE site" (10 CFR 1021.104). DOE and NRC's attempts to change federal regulations on TRU containers constitutes a reasonable indicator that future actions deserve discussion in the SWEIS.

According to a report issued by the Environmental Evaluation Group (EEG), TRUPACT-III containers present substantial dangers compared to the current TRUPACT-II containers. TRU-

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80/20.05 | PACT-II containers have 1/4 to 3/8 inch steel barriers, as well as a second internal wall, which provides additional shielding. The new TRUPACT-III containers feature only a single wall, which, if punctured, would create a substantial risk to the environment and to human health. Public confidence in the safety of TRU shipment would be eroded if the double-walled containers were no longer required. (Attachment 30)  
CONT.

The EEG report details both the dangers of accident-free doses resulting from normal shipments and the dangers of transportation accidents. EEG is an independent technical oversight group assigned to the New Mexico Institute of Mining and Technology and funded by DOE. EEG's work is directly relevant to the hazards associated with the proposal to ship more than 1000 drums of waste from LLNL to WIPP and should therefore be considered in the Draft SWEIS.

With regard to accident-free shipments, the report predicts that single-walled containers would increase on-site doses by 6.8% (EEG, p. 14). Doses to truck drivers would more than double with single-walled containers (EEG, p. 15). The dose to the public en route would increase by 37 to 52 person-rem (EEG, p. 15). All in all, double containment reduces the collective doses at WIPP by 45 to 62 person-rem (EEG, p. 16).

With regard to transportation accidents during shipment to WIPP, the EEG report predicts substantial danger to human health, as well as economic costs in the millions (EEG, p. 34). Shifting to the single-walled TRUPACT-III would make shipments more susceptible to both accidents and terrorist attacks (EEG, p. 39).

Eight governors of Western states also expressed concern about the potential change. In a March letter to the NRC, the governors of California, Arizona, Nevada, Oregon, Utah, Washington, Wyoming, and New Mexico asked for a rejection of the proposed shipping rule change. (Attachment 31)

The Draft SWEIS makes no mention whatsoever of the foreseeable use of TRUPACT-III containers for packing LLNL waste. LLNL plans to transport 1,000 drums of TRU to WIPP in 24 shipments, plus smaller annual shipments after 2004 (4.13.5: "Hazardous and Radiological Shipments"). Lawrence Berkeley National Laboratory (LBNL) plans to ship fourteen 55-gallon drums of TRU to LLNL, and then from LLNL to WIPP (3.3.16: "Berkeley Waste Drums").

The Draft SWEIS says that TRUPACT-II is typically used for such shipments, but the SWEIS does not disclose that this is likely to change if NRC approves TRUPACT-III for TRU shipments. It is inappropriate for the Draft SWEIS to omit discussion of this controversial change.

Assuming the use of TRUPACT-II for TRU shipments, the Draft SWEIS calculates the risks associated with the shipment of TRU waste. Under the Proposed Action, TRU shipments would add a collective dose of .69 person-rem per year (Table 5.3.11.2-1.); under the No Action Alternative, TRU shipments would add 1.0 person-rem per year (Table 5.2.11.2-1.); under the Reduced Operation Alternative, TRU shipments would add .54 person-rem per year (Table 5.4.11.2-1.). Based on the EEG report, these numbers would substantially increase if TRUPACT-III were used instead of the safer TRUPACT-II. These statistics must be recalculated in the

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80/20.05  
cont.

SWEIS with regard to the possibility of using TRUPACT-III for transportation, and then resubmitted for public comment.

The DOE promises to "conduct transportation operations in accordance with Federal and state regulations and will maintain procedures to ensure operations are safe" (5.6.12: "Traffic and Transportation"). It is disingenuous for DOE to assert compliance with federal regulations while simultaneously trying to change those same regulations by seeking NRC approval of TRUPACT-III containers.

Therefore, we ask that DOE address the likelihood of a shift from the TRUPACT-II containers to TRUPACT-III containers. DOE should also address the increased risks resulting from TRUPACT-III, as well as any other concerns raised by the EEG report.

The EEG report, which was funded by the DOE, should be taken into consideration when determining what is a safe packaging requirement. Please analyze and incorporate this report into the final document.

**h. DOE Should Provide a More Complete Analysis of Releases and Risks to the Workers and Surrounding Community Populations**

81/23.02

There are nearly 10,000 employees at LLNL. Many of the major proposals in the Draft SWEIS will result in significant worker and community exposures to radioactive and hazardous releases. Exposure under normal operations for the proposed action, as shown in Table 5.3.14.1-1, increases the lifetime risk of a latent cancer fatality (LCF) to an involved worker from approximately 5 in 100 to 8 in 100, while the reduced action decreases it to 2 in 100. Tri-Valley CAREs believes that these risk levels are unacceptable. Also, the SWEIS must set forth specific mitigation measures to be used to reduce these risks.

Regarding Table 5.3.14.1-1 and similar Tables, are the latent cancer fatalities (LCFs) given by year, 10 years or by the life of the project? If the life of the project, please state the assumption as to life expectancy of the project. Also, are the data in the table stated as an annual dose at maximum operations levels? Are the doses calculated at maximum dose rates for each operation at the Lab?

Under the No Action Alternative, tritium emissions at the LLNL main site will increase from 30 curies per year to 210 Ci per yr. (p.5.2.-26). Routine maintenance of NIF under No Action could release another 30 Ci. These levels of releases are unacceptable to Tri-Valley CAREs. Also, the SWEIS should state whether those levels (210 plus 30) are additive, or has the 30 been included in the 210? (See also our comments regarding the use of a categorical exclusion for the Tritium Facility Modernization project.)

82/20.01

All transportation under the proposed action will increase to 4 in 100,000 risk of an additional latent cancer fatality. This level is unacceptable. In other places, the document states that this is essentially no additional cancers. The U.S. Environmental Protection Agency (EPA) range of acceptable cancer risk (not fatalities) is one case in 100,000 to one case in one million. Tri-Valley CAREs has consistently supported the more stringent level as is applied to groundwater cleanup. Regulatory agencies agree that the more stringent level is the point of departure, unless

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cont.

there are reasonable measures taken to prevent additional cancers from occurring. In addition, as we will discuss in our comments on Health and Safety, no other health impacts are assessed in this document, thereby making the analysis inadequate.<sup>3</sup>

Regarding the above discussion, Appendix B (Waste Management) notes that the risk of a latent cancer fatality from transporting waste is 4 in 1,000 for the no action and proposed action, one in one thousand for the reduced option, as opposed to 9 in 10,000 for existing conditions. Please explain the discrepancy with the above comment. Additionally, as stated above, the U.S. Environmental Protection Agency (EPA) range of acceptable cancer risk (not fatalities) is one case in 10,000 to one case in one million.

The SWEIS does not disclose what roads are used for the radioactive material shipment. In addition to the routes transuranic wastes will travel from Berkeley to Livermore, what are the considered routes to Savannah River Site, WIPP and Hanford? How often will shipments occur and will local residents be notified when they will occur? Will shipments occur during peak traffic hours or during nighttime off-peak hours? Are the shipments adequately secured from a terrorist attack?

83/25.05

In the accident section and other sections of this report, latent cancer fatalities are given. However, these are not the only consequences from exposure to radiation and/or toxic materials. If any of the accidents or exposures were to occur, there would be other severe effects that would result, including non-lethal cancers and a number of diseases. Again, because of the isotopes involved, (e.g., highly enriched uranium and plutonium) the residual risks of disease from an accident would last centuries. The Draft SWEIS fails to provide information on these disease responses and therefore, decision makers in turn often fail to consider them. The SWEIS needs to include this crucial information.

DNFSB Reports That Should be Incorporated into the SWEIS: DNFSB monitors the nuclear activities of LLNL. The Board has made a number of critiques and suggestions over the years that should be incorporated in the SWEIS to improve future operational safety at LLNL. We note that as far back as 1995, the DNFSB recommended shutdown of plutonium building after important safety measures were missed (the facility was shut down for 6 months). (Attachment 32)

84/25.07

The Defense Nuclear Facilities Safety Board Chairman, John Conway, wrote that the number of infractions at Building 332 "raise questions as to whether DOE-OAK is staffed with the technical capabilities necessary to provide guidance" and that "neither DOE-OAK nor LLNL management appears to recognize or fully appreciate all of the problems of hazardous work control" (Letter from John T. Conway, Chairman of the DNFSB to Frederico Pena, Secretary of Energy, December 31, 1997).

The DNFSB also criticized vulnerabilities at Building 332 from single-point failures. That is, one system could lead to a failure of the built-in safety systems. In its letter of April 11, 2002, the DNFSB stated "The main issue outlined in the Board's letter of December 21, 1999, to DOE was the vulnerability of the Building 332 EPS [emergency power system] to singlepoint failures that would trigger the subsequent loss of one or more of the four separate downstream safety-class systems requiring emergency power. The staff observed that single-point failures still exist in the present EPS, including the

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cont. example explicitly cited in the Board's previous letter. Furthermore, it appeared that the laboratory has made few tangible attempts to remedy system vulnerabilities associated with single-point failures." The letter concluded that "The staff observed at LLNL a fundamental lack of understanding of system vulnerabilities in the Building 332 EPS."  
The SWEIS should incorporate these various letters and address the concerns that they raise.

85/25.06 **Incorporate Human Error into Release Calculations:** Accident analysis assumes an extreme event occurring. Under normal operations, it appears in the Draft SWEIS that the only releases and consequent exposures are planned events. Unfortunately, this is not how LLNL operates. There is a middle area where consistent human error causes unplanned but foreseeable releases to the environment, the worker population and to the public. Last October provides but one example: 12 workers were potentially exposed when a portion of the power for Building 332 was shut down. Plutonium in the glovebox should have been sealed; yet, workers eight years ago had decided not to replace the seals on the glovebox containing the plutonium. Because the vent system did not maintain negative pressure during the power outage, there was a leak. We note as well that many of the tritium accidents at LLNL have been attributed to human error and/or management or training failures. In fact, we note a longstanding pattern of these accidents involving numerous radioactive and hazardous materials. Taken together, these have caused us to question the training and safety of the Livermore Lab.  
It further leads us to believe that taking on additional plutonium and raising the plutonium and tritium material at risk limits are a mistake -- and all the safety implications must be fully evaluated and considered before doing so.  
The SWEIS as it is now written, does not reflect the culture that led to a history of human error and safety violations. We have documented at least 30 releases of radioactive materials to the environment (not including the numerous accidents with tritium), and approximately 40 reports, incidents or violations that could have led to releases. Most of these were due to human error. The SWEIS should plan for and incorporate the results of accidental but foreseeable and highly probable human error that will occur in the future and think creatively about mitigating it, rather than turn a blind eye to its inevitability.

86/23.01 **Plutonium in Livermore City Park:** The SWEIS should discuss the past releases from LLNL into the community. Plutonium has been found in significant amounts at Big Trees Park, in proximity to the LLNL main site. This is of significant concern to the public but it is not described as an environmental impact in the Draft SWEIS. This is especially important because LLNL is planning to more than double its plutonium inventory, the DOE should look at LLNL's history of operations and releases in determining whether LLNL is an appropriate site to house these materials.

87/24.04 **The LLNL Environmental Monitoring Program:** The SWEIS should consider the possibility that LLNL's environmental monitoring program may be missing radiation from LLNL activities that is escaping into the community. Radiological analysis of twelve ini-

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87/24.04  
cont. tial samples collected outside the LLNL fence line by The Radio Activist Campaign show that the community may be subjected to radiation that is in excess of is officially reported by LLNL. Of the twelve samples, TRAC found elevated levels of radioactivity in seven. The four radionuclides discovered in excess in the samples are: iron-59, strontium-90, cesium-137, and americium-241. The highest concentrations found by TRAC was in grass to the east of LLNL, contaminated with strontium-90 at 270 picocuries/kilogram(wet). The initial report is available on the web at [www.trivalleycares.org](http://www.trivalleycares.org), the report's implications should be discussed in the SWEIS. A final report, following additional sampling, is due from TRAC in September 2004.

88/16.02  
16.03 **i. The Proposed Expansion Violates the Endangered Species Act and Threatens Federal and State Listed Species.**  
The Endangered Species Act (ESA) protects "any species which is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). ESA also gives protection to threatened species: "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20). NEPA also affords consideration to candidate and proposed species. The Draft SWEIS has failed to adequately address and consider the effect on species of the expansions at LLNL main site and Site 300. The area surrounding and including the sites contain numerous endangered and protected species. The Draft SWEIS indicates that there are at least 124 federally and state-listed threatened, endangered, and other special status plant and animal species known to occur at the Livermore Site and Site 300 in 2001 and 2002. The Draft SWEIS claims LLNL operations will only affect a handful of them, but there is no explanation for why it only considers a few of the 124 species listed in table E.2-1. (Appendix E-39).  
**Relevant Species at the LLNL Main Site:** LLNL contains two important species to be considered by the Draft SWEIS. The first is the California red-legged frog (*Rana aurora draytonii*), a federally listed threatened species (61 FR 25813 et seq.) that has been seen in numerous places on the LLNL site. Additionally, several places on LLNL grounds were considered critical habitat prior to a 2002 court order. However, on April 13, 2004 USFWS re-proposed critical habitat for the red-legged frog. ([http://sacramento.fws.gov/ea/news\\_releases/2004%20News%20Releases/California\\_red-legged\\_frog\\_Crit\\_Hab\\_Reproposed\\_NR.htm](http://sacramento.fws.gov/ea/news_releases/2004%20News%20Releases/California_red-legged_frog_Crit_Hab_Reproposed_NR.htm)). It is therefore reasonably foreseeable that re-listing of critical habitat could occur within the period covered by the SWEIS and should therefore be discussed in detail. (Attachment 33)  
The second important species listed in the Draft SWEIS is the California tiger salamander (*Ambystoma californense*), a federally listed proposed threatened species (68 FR 28649) that has been seen in the vicinity of LLNL just 1100 feet away. (Appendix E-46) It is therefore reasonably foreseeable that the tiger salamander could be spotted on the LLNL site within the period covered by this SWEIS, and must therefore be discussed in the biological assessment.  
**Relevant Species at the LLNL Site 300:** Site 300 contains numerous species to be considered by the Draft SWEIS. The red-legged frog and the tiger salamander have been spot-

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ted throughout Site 300, and 60% of the site is critical habitat for the frog. (Appendix E-18). The Alameda Whipsnake (*Masticophis lateralis euryxanthus*), a federally listed threatened species (62 FR 64306) has been seen at Site 300, which contains the constituent elements of the Alameda Whipsnake's critical habitat (Appendix E-68). USFWS could reinstate the snake's critical habitat at Site 300. There are also 24 species of birds that are Federal species of concern or State species of special concern (Appendix E-26), as well as a population of nesting raptors (Appendix E-25). The large-flowered fiddle-neck (*Amsinckia grandiflora*), a Federally and state-listed endangered species (50 FR 19374), can also be found on Site 300 in critical habitat near building 858. (Appendix E-70). The San Joaquin kit fox (*Vulpes macrotis nuttica*) a Federally endangered (32 FR 4001), state threatened species, has been seen in the vicinity. (Appendix E-70). The Valley Elderberry longhorn beetle (*Desmocerus californicus dimorphus*) a Federally threatened species (45 FR 52803) has been detected in the vicinity, and there are signs that it has been on the Site. (Appendix E-70). The Swainson's Hawk (*Buteo swainsoni*), a state threatened species, was seen on the Site's southern perimeter in 1994, and it probably forages on Site 300 grounds. (Appendix E-71).

The Draft SWEIS only discusses in detail the first three species listed here, but the ESA requires a more in-depth biological assessment given the range of species found on the grounds. DOE cannot simply brush aside these species by unsubstantiated assertions that the impacts are negligible. As such, the current biological assessment in the Draft SWEIS is methodologically incomplete.

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The Draft SWEIS mentions that Peregrine falcons have been detected at Site 300 during season surveys but states in a bare conclusory fashion that "[b]reeding pairs are not anticipated to occur on the property". We assert that the SWEIS should study the impacts of the proposed activities on the Peregrine falcon, a recently de-listed species but one that is being monitored carefully.

The Effect of the Proposed Actions on These Species at the LLNL Main Site: The biological assessment makes no mention of any allowed incidental take at the LLNL main site, so no leeway should be granted for proposals that risk harming protected species. Additionally the biological assessment fails to discuss the impact on the tiger salamander at LLNL. The entirety of the assessment discusses only the red-legged frog. Yet the salamander is in close proximity to the lab (within 1100 feet, Appendix E-46), and it is reasonably foreseeable that the salamander could be found on the grounds. Additionally, the biological assessment does not indicate that any detailed survey was done with regard to the salamander, so the claim that it has not found them may be a case of LLNL simply not looking hard enough.

Moreover, the specific plans detailed in Appendix E risk serious harm to the red-legged frog. We have outlined the harms in the following paragraphs.

First, the ongoing Arroyo Las Positas Maintenance Project occurs in an area that is full of red-legged frogs (Appendix E-51). Yet the project would remove 20% of Typha wetland vegetation, a potential critical habitat area for the frogs (Appendix E-48). Heavy equip-

ment will be used to remove some growth in the arroyo, as well as for erosion repair and stabilization measures (Appendix E-51). Cuttings and debris for willow stand removal will also require heavy equipment like front-end loaders, and typha cutting would use riding mowers in the red-legged frog habitat. Weed-whackers and tractors would be used on the upper banks (Appendix-51). In light of the extensive work done with heavy machinery, LLNL's assertions of low take are not biologically substantiated. On-site biologists' ability to monitor these actions would be very limited due to the scope of the proposed maintenance.

Second, the maintenance of other onsite drainage systems (DRB, B571 Wetland) could endanger the frogs, which have been found in the DRB (Appendix E-52). Vegetative growth removal and sediment removal would use heavy machinery like backhoes, as would the installation and removal of culverts (Appendix E-52). LLNL would attempt to mitigate this damage by relocating discovered frogs to the arroyo, but it may be too late after the use of the not-so-delicate backhoe. Additionally, this mitigation strategy puts too much faith in a workers ability and desire to differentiate between the red-legged frog and the other non-protected species in the DRB. Finally, DRB could also be assigned critical habitat status for the red-legged frog in the future (see figure E.2.1.5.2-1., Appendix E-54).

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Third, the bullfrog management activities could harm the red-legged frog. Each of the three methods for killing bullfrogs could easily wind up killing the red-legged frog. Giggling and high-powered air rifles are currently used, but the SWEIS does not say that the people doing so are trained in biology, or whether they can tell a red-legged frog from a young bullfrog (Appendix E-55). Dewatering the DRB would also endanger any red-legged frogs in the DRB (Appendix E-55, E-52). Finally, rotenone use would be just as dangerous for the red-legged frogs as for the bullfrogs because "Rotenone works by inhibiting the biochemical process at the cellular level making it impossible for fish, amphibians, and aquatic insects to use the oxygen absorbed in the blood and needed in the release of energy during absorption." (Appendix E-56). This process would endanger red-legged frogs regardless of the time of application of the poison. There is no precision for determining amphibian metamorphosis, and when threatened species are being dealt with - the risk of externalities is too high.

Fourth, construction-related activities for a number of LLNL SWEIS projects would disturb 462,000 square feet of undeveloped area, potentially near frog habitat.

Fifth, maintenance of security buffers components would occur in areas located in critical habitat designated for the red-legged frog. Perimeter fence maintenance would occur in formerly-designated critical habitat, so the SWEIS must address the probability of future re-listing in that area (Appendix E-61). The SWEIS makes no mention of what tools would be used for these maintenance projects. Heavy equipment could destroy critical habitat, or red-legged frogs themselves.

Sixth, the decontamination and demolition of facilities, specifically buildings 171, 292, and 514, could threaten the red-legged frog. Building 171 is currently a hazardous waste

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accumulation facility (Appendix A-46). Building 292 is contaminated with tritium (Appendix A-116). Building 514 is a liquid waste storage and wastewater treatment facility, with potentially toxic levels of metals, oils, and solvents. Overpressurized containers at Building 514 may also be hazardous (Appendix A-97-98). The dangers these buildings could cause to the frogs if improperly decontaminated demands further discussion in the SWEIS. The SWEIS also concedes that there is a chance of direct mortality from the demolition of the buildings. (Appendix E-61).

Seventh, maintenance of facilities, paved roads, and utilities could also require new NEPA analysis and therefore new ESA analysis. (Appendix E-57). These projects could occur anywhere on the grounds, including areas that are within the "dispersal capability" of the red-legged frog (Appendix E-61). The existing discussion in the SWEIS is too open-ended and unspecific.

Eighth, landscaping and grounds maintenance could endanger critical habitat without substantial biologist oversight (Appendix E-57). Again, these projects could occur anywhere on the grounds, including areas that are within the "dispersal capability" of the red-legged frog (Appendix E-61). The existing discussion in the SWEIS is too open-ended and unspecific.

Ninth, application of herbicides would threaten red-legged frogs and critical habitat (Appendix E-57). The SWEIS does not say exactly where application would occur but it admits it would occur around the security fences and perimeter, an area of red-legged frog habitat. Additionally, there are multiple dangers associated with herbicide use, especially wind, overdose, and habitat contamination via waterflow. These concerns are not adequately addressed in the SWEIS.

Tenth, the invasive species control program would pose the same threats to red-legged frogs as those discussed above on the bullfrog issue.

Eleventh, vehicle traffic would increase with the job growth anticipated under the proposed action. Heavy travel occurs both on and around the lab (SWEIS 4.13.2). The SWEIS concedes the danger of traffic to red-legged frogs (Appendix E-62). It is not much of a mitigation to claim that the traffic will be mostly during the daytime, since juvenile red-legged frogs and some adult red-legged frogs are active during the day. ([http://sacramento.fws.gov/es/animal\\_spp\\_acct/red\\_legged\\_frog.htm](http://sacramento.fws.gov/es/animal_spp_acct/red_legged_frog.htm)) Other sources indicate that the red-legged frog is primarily diurnal. ([http://animaldiversity.umich.edu/site/accounts/information/Rana\\_aurora.html](http://animaldiversity.umich.edu/site/accounts/information/Rana_aurora.html)). There would also be some amount of traffic at night. (Attachment 34)

The Effect of the Proposed Actions on These Species at the LLNL Site 300: Site 300's current incidental take allowance from USFWS is 25 red-legged frogs and 5 Alameda whipsnakes. Yet the SWEIS concedes that extra projects at Site 300 will not meet that limit, and will require additional conferences with USFWS (Appendix E-72-73). NNSA should address how it will proceed if it is denied extra take by USFWS. The absence of such a reasonably foreseeable occurrence makes the draft SWEIS incomplete.

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Moreover, the specific plans detailed in Appendix E risk serious harm to the California red-legged frog, the California tiger salamander, and the Alameda whipsnake, as outlined below.

First, the SWEIS concedes that grading and maintaining fire trails could result in direct mortality of Alameda whipsnakes (Appendix E-90).

Second, the ongoing program of maintenance of the storm drainage system could kill both red-legged frogs and tiger salamanders (Appendix E-83, E-94). Backhoes will be used for culvert maintenance, and heavy equipment will be used for debris removal (Appendix E-73). This equipment could result in direct mortality to these threatened species.

Third, Site 300's plans for improving and installing culverts could also harm both red-legged frogs and tiger salamanders, which live in ponded areas (Appendix E-84, E-95). Three of the four installation sites for culverts will be in red-legged frogs' critical habitat. Since the reinstatement of critical habitat is a reasonably foreseeable occurrence, the SWEIS should discuss this project more specifically in the context of the potential re-listing of critical habitat.

Fourth, the prescribed annual burning could have huge impacts on all three species. Prescribed burns would occur over 620 acres of red-legged frog critical habitat, and 385 acres of Alameda whipsnake critical habitat (Appendix E-75-76). Whipsnakes are likely to be within 400 feet of the fires (Appendix E-90). Also, Song Pond, a known breeding habitat for the tiger salamander, is in the path of a prescribed burn (Appendix E-94).

Fifth, the termination of surface water releases from Buildings 827, 851, and 865 would significantly destroy red-legged frog breeding grounds. The release at Building 865 is home to three breeding pools for red-legged frogs (Appendix E-79). The pools are a known breeding ground, and biologists have seen frogs there for the last six years (Appendix E-84). The proposed relocation site at the SHARP Facility is inadequate because that site contains unknown levels of tritium (Appendix E-99). The site also does not have the proper characteristics to serve as a red-legged frog breeding ground (Appendix E-100). The SWEIS should provide a detailed mitigation plan for how LLNL intends to ensure that the mitigation measures will be adequate. The SWEIS should explain how will the mitigation pond be designed and protected so that it may serve the functions provided by the original pond.

Sixth, construction related projects like the Energetic Materials Processing Center would endanger red-legged frogs. The processing center would be constructed on 40,000 square feet of red-legged frog critical habitat (Appendix E-86).

Seventh, the demolition of facilities at Site 300 could occur in critical habitat, and the SWEIS concedes that demolitions would kill any red-legged frogs or tiger salamanders in the area (Appendix E-86, E-95).

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Eighth, maintenance of facilities, paved roads, and utilities would occur in the southwest portion of Site 300, which is suitable habitat for Alameda Whipsnakes (Appendix E-92). This maintenance could directly result in snake mortality. Additionally, the draft SWEIS says that most maintenance work would occur upland and therefore would not disrupt tiger salamanders (Appendix E-95). However, the prior page indicates that salamanders live in "upland refugia" (Appendix E-94). If this is true, it would mean that upland maintenance would threaten the tiger salamander. Please clarify whether California tiger salamanders live primarily upland or not, and what impact this location might have on their mortality under the proposed actions.

Ninth, the landscaping and grounds maintenance at Site 300 would present the same concerns as those mentioned in the prior paragraph.

Tenth, herbicide application would present significant risks. Application of herbicides could threaten red-legged frogs, Alameda whipsnakes, and tiger salamanders, and their critical habitats (Appendix E-87). The SWEIS does not say exactly where application would occur. There are multiple dangers associated with herbicide use, especially wind, overdose, and habitat contamination via waterflow. These concerns are not adequately addressed in the SWEIS.

Eleventh, ground squirrel control at Site 300 presents significant risks to all three species. The SWEIS does not explain what effect fumitoxin fumigant, traps, or zinc phosphide would have on the frogs, snakes, or salamanders (Appendix E-82). Nor is there any discussion of how poisoned squirrels might contaminate the food chain of other species including birds that forage at Site 300. The draft SWEIS is too dismissive of these concerns, and offers no explanation of why the risks are "negligible" (Appendix E-87, E-93, E-96). Common sense dictates that chemicals capable of killing squirrels are likely to also kill frogs, snakes, and salamanders.

Twelfth, vehicle traffic could also pose a danger to protected species. The SWEIS concedes that there is a possibility of red-legged frogs, Alameda whipsnakes, and tiger salamanders being killed by traffic (Appendix E-87, E-93, E-96). Additionally, the Advanced Test Acceleration drainage ditches adjacent to the road have large populations of red-legged frogs (Appendix E-87). The assertion that species are not likely to be affected because traffic occurs during the day may be biologically unfounded, as our preliminary research indicates that these species are at least somewhat active during the day. Alameda whipsnakes are diurnal.

([http://sacramento.fws.gov/es/animal\\_spp\\_acct/alameda\\_whipsnake.htm](http://sacramento.fws.gov/es/animal_spp_acct/alameda_whipsnake.htm)). Other sources indicate that the red-legged frog is primarily diurnal. ([http://animaldiversity.ummz.umich.edu/site/accounts/information/Rana\\_aurora.html](http://animaldiversity.ummz.umich.edu/site/accounts/information/Rana_aurora.html)). Moreover, the draft SWEIS concedes that power-intensive projects at LLNL will be conducted primarily at night, such as the experiments at the National Ignition Facility and at the Terascale Facility. This will increase the amount of traffic and employee activity at night, impacting species that are active primarily at night.

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Thirteenth, explosives testing will occur daily to weekly (Appendix E-82). These tests could cause direct mortality of red-legged frogs, Alameda whipsnakes, and tiger salamanders, as well as some birds protected under the Migratory Bird Treaty Act (MBTA). There is little discussion of the impact of the explosions on these species. The SWEIS needs to explain whether explosions or their fallout would cause mortality to any protected species. It is overly dismissive of these concerns claiming that explosives would occur during the day when these species are not active. This seems almost comical. If anything will awaken nocturnal creatures, it's explosives testing. Additionally, these species are at least partly diurnal (see above). The SWEIS also concedes that "Diurnal raptors that forage directly over the facilities are the species most vulnerable to flying debris and shock overpressure; these include the golden eagle, prairie falcon, northern harrier, black-shouldered kite, ferruginous hawk, and red-tailed hawk. Smaller birds may also be affected." (Appendix E-36). Most of these species are protected under the MBTA and are California species of special concern, and the ferruginous hawk is also a Federal species of concern (Table E.2-1.). However, the biological assessment makes no mention of the effect of the explosives testing on them. The SWEIS should discuss the effects of the physical explosions, the effects to air quality, impacts resulting from the sound of the explosions and the hazardous substances subsequently dispersed and how they will specifically affect protected species populations. Regarding Site 300, please describe what is actually occurring in terms of releases of radioactive substances being used in shots, environmental testing of explosives assemblies or in other experiments. Note in this regard that the Draft SWEIS states that most shots would be fired on the outdoor firing tables "for the foreseeable future."

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The LLNL Site 300 "could be judged one of the largest native grasslands of this kind currently known in California." Please describe if there are other comparable grasslands and the value of this land, particularly in view of the fact that resources of this type are becoming ever more scarce. Please determine if there are other sites where the explosives tests could occur that would allow this grassland to be preserved. We would like to see a cost-benefit analysis with alternative sites evaluated for the explosives testing.

89/16.04

Fourteenth, the explosive process water surface impoundments and sewage oxidation pond activities could harm red-legged frogs and tiger salamanders, both of which have been seen in the overflow pond, and the salamander has been seen in explosives process water surface impoundments (Appendix E-97).

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The Proposed Mitigations Are Inadequate: First, the Draft SWEIS frequently cites mitigation measures that were approved by USFWS. Many of these measures that were approved and coordinated by USFWS for LLNL were done so in 1998, 3 years prior to the listing of critical habitat in March of 2001 (Appendix E-64, E-68). If critical habitat is re-instated then LLNL cannot assume these same measures would pass muster under the stricter requirements for critical habitat. The SWEIS needs to discuss updated measures so that the regulators, legislators and community members can comment on the adequacy of the plans.

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88/16.02, 16.03 cont.

Second, mitigation measures for the Alameda whipsnake are especially ineffective because they rely on identification, trapping, removal, and relocation, a highly unlikely scenario when workers are confronted with a snake (Appendix E-94). Such measures might work with the red-legged frog, but not with a snake. Please describe how LLNL plans to ensure worker compliance with the mitigation measures.

Third, the proposed breeding habitat at the SHARP Facility is inadequate because that site contains unknown levels of tritium. (Appendix E-99). The site also does not have the proper characteristics for a red-legged frog breeding ground (Appendix E-100).

Fourth, many of the proposed mitigations require on-site observation by qualified wildlife biologists. However, few places mention whether this biologist would be a lab employee or an independent contractor. It is exceedingly important that wildlife training and mitigation be done by unbiased and disinterested parties. The SWEIS should detail the requirements and qualifications for any biologists involved in mitigation measures. Also, identify specifics of the mitigation strategy that will be employed and whether the destroyed ponds will be replaced by mitigations that are larger than the destroyed pond.

Moreover, at Site 300, the Tracy Hills development is planned approximately 2 miles from the site boundary. At the southern boundary there are ranches. With increased shots and tritium releases, DOE should address the issue of encroachment.

Proposed wetland mitigation measures are also inadequate. With regards to wetlands at LLNL Site 300, the proposed action terminates surface releases at Buildings 865, 851, and 827. The SWEIS states that this was coordinated with the USFWS and received approval contingent upon implementation of mitigation measures in a recent Biological Assessment and related Biological Opinion (Jones and Stokes 2001, USFWS 2002b). Please provide document submitted to the USFWS.

**i. The SWEIS Should Include a Full Discussion of Superfund Issues**

Both LLNL Site 300 and the main site are "Superfund" sites, covered by the rules and regulations regarding the Comprehensive Environmental Responsibility and Liability Act (CERCLA). This document has very little discussion of CERCLA issues, and makes the general statement that remediation (i.e., cleanup) will continue under all three alternatives. The document does recognize that by increasing the use of hazardous material, there is a small possibility of increased releases, but makes no effort to qualify where this might occur.

90/24.03

The overwhelming community sentiment is that before expanding program activities that could increase the spread of hazardous materials in the environment, both sites must be cleaned up. Equally important is the fact that the cleanup budget for both sites has been strained over recent years, and we are extremely concerned that an increase in program activity at LLNL will cause a decrease in budget for cleanup. As recently as this year, LLNL requested the regulatory authorities overseeing cleanup to delay certain milestones under the Federal Facilities Agreement because of budgetary shortfalls. The community and the agencies have so far acquiesced to these requests, but if there is an increase in program activities that takes money from cleanup, Tri-

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90/24.03 cont.

Valley CAREs will not agree delaying milestones in the future – and we will urge the regulatory agencies that have binding agreements not to do so.

We would also like DOE to carefully consider its existing cleanup agreements when considering expanding program activities and evaluate if new programs will chew into the cleanup budget. This issue should be given high priority in the SWEIS. Potential "trade offs" that may lead to cleanup budget shortfalls must be discussed in the SWEIS.

**k. LLNL Site 300 -- Additional Issues and Questions Must be Addressed**

Section 3.4.7 states that tritium emissions from hydro shots at Site 300 would result in 150 to 200 Curies per year (reduced action versus no action and proposed action). However, in document 1391, LLNL, Tritium Usage at Site 300, Lawrence Livermore National Laboratory, Livermore, CA, February 2003, it is stated that Tritium usage at Site 300 will be 80 mg in the proposed action (800 curies). Please clarify in the SWEIS the number of curies of tritium that will be used in the proposed action at Site 300.

The community was assured in the 1992 SWEIS/EIR public hearings that no tritium would be used in shots. Tri-Valley CAREs believes that tritium should not be allowed in "shots" at Site 300 nor in environmental testing of explosives assemblies that release radioactive tritium into the environment.

Regarding the test shots at Site 300, it is important that to know what experiments are being undertaken, what their purpose is, their location and what materials are being used. There is no specific information in the Draft SWEIS.

91/17.01

Again, it is important to note that most shots would be fired on outdoor firing tables "for the foreseeable future," not the contained firing facility. Tri-Valley CAREs asks the following questions, which should be answered in the SWEIS:

- How many shots are planned per year?
- Where will these shots be conducted? How much groundwater contamination will result from these shots? The amounts of tritium for proposed shots should be considered in the SWEIS.
- What is the composition of the shots / how much tritium will be used and what pollutants are by-products of the shots? How are the biological and health effects (including diseases other than latent cancer fatalities) of tritium accounted for in workers and the public? In endangered species?
- How much depleted uranium will be used? How are the biological and health effects of aerosolized depleted uranium (including other than latent cancer fatalities) accounted for in workers and the public? In endangered species?
- What disposal method will be used for all of the different types of debris from the shots?
- Have they undergone environmental modeling?
- How are these activities reported, and are they reported to EPA?

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92/20.02	<p>The shipment of explosive materials can be hazardous. Most of the hazardous shipments to and from Site 300 are explosives shipments (approximately 300).</p> <ul style="list-style-type: none"> <li>• What is the increased risk of environmental impacts resulting from transport including radiation exposure, accidents, spills or terrorist activity en route?</li> <li>• What proportion of shipments will be handled by commercial contractors?</li> <li>• What is the impact of choosing commercial contractors versus lab employees?</li> </ul> <p><b><u>I. Waste Management Analysis is Inconsistent and Must Be Revised</u></b></p>
93/22.01	<p>In Table B.3-1.—Activity Levels Used to Analyze Decontamination and Waste Treatment Facility and Area 612 Facilities Under the No Action, Proposed Action, and Reduced Operation Alternatives (Routine plus Non-routine). DOE provided quantities of Transuranic (TRU) Waste that are not consistent with the levels of TRU waste that are generated by the Livermore Lab. For example, the Draft SWEIS indicates that 14 cubic meters will be created at these facilities. In other points in the document, the levels of TRU waste generation will be 70 cubic meters under the proposed action. Please explain this discrepancy. If TRU waste will not be processed/stored/packaged at the waste facilities, where are they expected to be treated? Also, assuming that DOE has provided incorrect data on this Table, we note that the SWEIS postulated accident scenarios assume that the risk to certain populations come from these facilities. Therefore it is very important that the correct data is used.</p>
94/22.03	<p>In Appendix B, there are estimates of Class 1, 2 and 3 permit modifications. For the proposed action, there are 100, 20, and 2, respectively. The SWEIS should identify these modifications where known, and if not known, provide the reasoning for establishing these numbers. Moreover, some justification for determining which ones DOE believes will be Class 1, 2 or 3 modifications should be given.</p>
95/20.05	<p>Regarding Section 3.3.15 (Direct Shipment of Transuranic Wastes from the Superblock), are there TRUPACT-II containers available to transport the TRU waste? The SWEIS should provide whether certification will occur? Please provide a description of "pipe overpacks".</p>
96/25.06	<p>Please describe in more detail assumptions about arrays of drums at B-625. The description in the SWEIS is that there is an assumption that the maximum curie limit for one drum would be 60 Ci Pu-equivalent, surrounded by four drums with 12 Ci Pu-equivalent. Is this a requirement or regulation for Building 625? If so, please provide a citation. If not, please explain why this assumption is made.</p>
93/22.01 cont.	<p>Has the mobile vendor for waste heading for WIPP begun characterization? Please provide the latest information, including how many drums have been characterized, whether all have met the WIPP acceptance criteria, and provide an updated schedule of shipments.</p> <p>Is the legacy TRU and mixed TRU waste going to be shipped directly to WIPP, or will it be shipped to an interim site (e.g., INEEL, Hanford). We are enclosing LLNL's presentation to</p>

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93/22.01 cont.	<p>Dave Conrad by Tom Grim on November 8, 2002, graph number 869 – that stated that TRU Waste transport to WIPP may travel via Hanford. (Attachment 35) If the answer is the latter, Appendix J should be modified to state this, and all accident analysis regarding these shipments should be re-evaluated.</p>
97/22.05	<p>Regarding Table B.3-2, TRU waste generation is less for the proposed action (70 m3/yr) than for the No Action Alternative (105 m3/yr) Please provide an explanation. We note that TRU waste relating to the ITP will increase by 10.4 m3/yr.</p>
98/17.03	<p><b><u>m. Decontamination and Decommissioning Activities are Inadequately Addressed</u></b></p> <p>All decontamination and decommissioning (D&amp;D) activities have not been thoroughly taken into consideration and should have been.</p> <p>Please be sure all radiological and non radiological air quality and decontamination and decommissioning (D&amp;D) is described at the LLNL main site and Site 300. Also please be sure that the SWEIS does take into consideration the full range of contaminants that D&amp;D activities may involve. For example, if asbestos contamination is addressed, the discussion must also address any of the other contaminants that may exist in a facility as a result of the particular scientific research that is conducted at the LLNL main site or Site 300.</p> <p>Discussion of the potential air quality effects of D&amp;D from other sorts of contaminants should be incorporated into the SWEIS. Buildings or floor space marked for D&amp;D may have been the site of unique exposure to contaminants that, although not common to all of the D&amp;D activities, warrants consideration because of the singular problems they may pose.</p>
99/20.02	<p>Also, the potential effects on air quality from both the transportation and eventual disposal/storage of contaminated demolished facilities needs to be taken into account. The potential for adverse air quality effects exists at any facility to which D&amp;D materials are transported, as well as the regions through which the materials are transported. Such discussion should be incorporated in the SWEIS.</p> <p>The shipment of explosive materials can be hazardous. Most of the hazardous shipments to and from Site 300 are explosives shipments (approximately 300).</p> <ul style="list-style-type: none"> <li>• What is the increased risk of environmental impacts resulting from transport including radiation exposure, accidents, spills or terrorist activity en route?</li> <li>• What proportion of shipments will be handled by commercial contractors?</li> <li>• What is the impact of choosing commercial contractors versus lab employees?</li> </ul>
100/25.06	<p><b><u>n. Weakness of Probabilistic Risk Assessment and Related Concerns</u></b></p> <p>The SWEIS should be forthcoming about the inherent weaknesses in risk assessment by providing an adequate description of what assumptions are used and what weaknesses are inherent in risk calculation.</p>

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100/25.06  
cont.

There are many decisions that are made in a risk analysis that can skew the analysis toward one outcome or another. For example, when quantifying the risk of accident or illness, does the document describe what relevant info is unavailable? Does the assessment assume the DOE is operating in compliance with all regulations? Does the scenario assume that the building design is completely adequate? Does it take into account all relevant factors such as the 108 buildings at LLNL that have potential seismic concerns? Did they look at non-cancer fatalities and illnesses? Do the risk calculations take into account different kinds of exposure that can occur? Internal verses external? Inhalation verses ingestion? Does the analysis take into account the persistent dose rate to a person throughout their lifetime - what the DOE calls the "committed dose". Does the risk assessment account for variations expected for different individuals, variations expected for different species and the difference in dose response due to the age when the organism is exposed? Is human error in operations factored into the calculations? If a risk assessment does not account for relevant information, omitted information should be acknowledged so that the public can come to its own evaluation of the weight that should be attributed to these types of calculations.

Do the risk assessments rely heavily on assumptions extrapolated from the A-Bomb survivor studies? Standards for radiation safety have long relied on these studies that many experts in the scientific community argue are flawed. (Attachment 36).

Please indicate in the SWEIS from where the assumptions are derived for calculating the Life-time Cancer Fatality (LCF) numbers.

101/17.05

In Section 3.6.5, it is asserted that radiological air emissions from normal operations would be between the Maximum Exposed Individual (MEI) dose for the Livermore main site under the No Action Alternative would be 0.1 millirem per year, 0.13 millirem per year under the Proposed Action and 0.09 millirem per year under the Reduced Action alternative. At Site 300, the MEI dose from firing table 851 would be 0.055 millirem per year under the No Action Alternative and the Proposed Action, and 0.054 under the Reduced Operation Alternative. Please describe how these numbers were derived.

**o. The Draft SWEIS Should also be Made Compliant with the California Environmental Quality Act**

102/32.01

In 1992, DOE published a joint Site Wide Environmental Impact Statement and Environmental Impact Report, while in 2004 it has chosen to sidestep the California Environmental Quality Act (CEQA). At this date, twelve years later, it is time for an update of the 1992 CEQA review. Our review of the Draft SWEIS reveals that are many aspects of the document that must be made CEQA compliant.

For example, as noted above, the document proposes many changes in hazardous and radioactive mixed waste treatment, storage and disposal that will make it necessary for LLNL to apply for well over one hundred modifications to its Part B permit. That permit is issued by a state agency, the Department of Toxic Substances Control. Air, water and other media affected by the proposals contained in the Draft SWEIS are also state issues. While DOE appears to have anticipated

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102/32.01  
cont.

this comment and provided something that is "CEQA-like," we wonder why DOE did not take the opportunity to make the document a Site Wide EIS/EIR?

Further, the LLNL manager is a state entity, the University of California. The question here is not whether there is an appropriate "lead" and/or "cooperating" state agency, the question is which agency should lead. Tri-Valley CAREs believes that the most appropriate state agency to serve as "lead" agency is DTSC. However, in 1992, the "lead" agency was the University of California. They, too, must be considered for the role.

Finally, CEQA contains requirements that are substantially different from NEPA. For example, CEQA has an even more robust requirement for mitigation measures than NEPA. Further, CEQA is a good framework for dealing with water and energy issues. The list could go on. These examples should suffice to point out that the Draft SWEIS, as it currently stands, does not comply with CEQA -- and should. While this could be remedied by the preparation of a separate EIR, it seems logical to combine them, as was done in 1992.

As with other serious omissions and deficiencies in the Draft SWEIS, this will necessitate re-issuing a draft for public comment.

**p. Two Specific FOIA Requests are Relevant to our SWEIS Comments**

103/31.06

First, on March 17, 2004, Tri-Valley CAREs, pursuant to FOIA, requested documents related to transuranic (TRU) waste and its shipment to and from LLNL. The request specified: "We want to emphasize that the requested records are relevant to the preparation of comments on the SWEIS. We therefore reiterate the time-critical nature of the request." We have only received two responses, a form response, dated April 5, indicating that the request was being reviewed, and that additional time may be required and a second letter on May 17, 2004 that informs us that they are working on our request. No date or timeframe is given for an expected response.

Second, also on March 17, 2004, Tri-Valley CAREs requested documents related to the Advanced Material Program (AMP) at LLNL. Like the TRU request, this request stressed the importance of these documents to our ability to adequately comment on the SWEIS. The request stated: "Information obtained from this FOIA request will be used in preparation of newsletter articles and fact-about the SWEIS and will increase public understanding of these DOE activities." And: "We reiterate that the requested records are needed to inform our community outreach efforts around the SWEIS. We therefore emphasize the time-critical nature of the request." We received a response assigning a reference number, but did not receive any subsequent documents. No time frame was provided as to when we might expect responsive documents.

These requests were important for both our comments and our community outreach surrounding the SWEIS. We urge DOE to expedite processing these requests so that we may supplement our comments on the SWEIS. Additionally, please provide us with a timeframe by which you will respond to these requests.

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**VII. DOE SHOULD IMPROVE DOCUMENT STRUCTURE AND ADDRESS TECHNICAL CONCERNS**

The Draft SWEIS is poorly integrated and is therefore difficult to follow. The Draft SWEIS should include a comprehensive cross-referencing and indexing system so that it can be adequately evaluated. Additionally, it should put effort into describing health and environmental effects and other information in plain English.

**a. Need For Integration Throughout Document**

Our review of the Draft SWEIS reveals that the document has been written in discrete parts without the benefit of integration and therefore the document as circulated for public comment is disjointed and does not provide reviewers with an accurate picture of the full spectrum of environmental impacts posed by the project. This was especially apparent in sections such as seismicity and the biological assessment, but was evident throughout.

**b. Need for Cross-referencing and Indexing**

The SWEIS is a 2000-plus page document that includes many sections that overlap. Since it is highly unlikely that even a fraction of the decision-makers and community members that are evaluating this document will have the opportunity to read it cover-to-cover, it is essential for the SWEIS to include an elaborate cross-referencing system.

For instance, the growing Biology and Biotechnology Research Programs are not given a dedicated section of the SWEIS. This makes it very difficult for readers to evaluate the purpose and need, proposed impacts, waste streams, transportation risks and new proposals in a concerted manner. If a dedicated section cannot be drafted that attempts to compile this information into a coherent analysis, cross-references should be indicated.

Also, whenever there is a substantial overlap between the assessments of two sections of the document, a cross-reference should be indicated. For example, in the Biological Assessment, information is provided as to the impacts of the Energetic Materials Processing Center emanating from pollution releases to the environment. This should be cross-referenced with all other discussions of the impacts from these projects. Possibly a grid could alleviate this problem. An index should also be included in the document to assist in the onerous navigation of this document.

**c. Need for Plain English**

A SWEIS must be written in plain language that avoids excessive technical jargon or over reliance on technical analyses confusing to the general public. "Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts." (40 CFR 1502.8)

103/31.06  
CONT.

Many of the impacts to the health of workers and to the exposed community are quantified in terms of Latent Cancer Fatalities and incorporated into charts. It is extremely difficult for laypersons to understand what this means in plain English.

Please revise the SWEIS so that the deaths, illnesses, and quantities of environmental releases are accounted for in an easier to understand prose format. For instance, numbers such as  $6.1 \times 10^7$  (see page S-27) are useful to include in the document but the document should supplement this with the plain English meaning of this number and a description of what the relevance of this number is in relation to the number of people in the community; e.g. the number illnesses and deaths in Livermore and the number of illnesses and deaths in the San Francisco Bay Area.

Also the assumptions made in each calculation should be listed. Factors that are not accounted for in these quantifications should also be described, such as non-cancer fatalities, the age-range of people who are accounted for in the assumptions and the length of exposure that is assumed. The document should also attempt to describe economic impacts to the community resulting from routine and accidental releases. The inventory of radiological materials (See Table A.4-1) is sometimes provided in grams, while at other times in curies. Please make this table and all other tables consistent. Also, please provide conversion rates for grams to curies for radionuclides of concern at LLNL.

In numerous instances throughout the Draft SWEIS, data was published in truncated form in a table, but never appears anywhere in the text. The data is, therefore, never explained and remains incomprehensible and unavailable to most of the public. For example, a table in the main text lists a CX, or categorical exclusion, for the Advanced Materials Project, while Appendix N refers only generically to an unnamed, uncategorized NEPA review document. Is the NEPA review document referred to in Appendix N a categorical exclusion? Or, is the CX referred to in the table a different NEPA document? Without appropriate descriptions, the public cannot ascertain key facts from the Draft SWEIS.

Moreover, units should be used that are well-known to laypeople and to the scientific community. Units with "fudge-factors" that allow for variation should either not be used or should be described so that their variation can be understood. For example, the unit used in the draft SWEIS, Plutonium-Equivalent Curie (see page S-27), should either be discarded or should be given some explanation. This term was used a number of times and we could not find where this term was defined in the Draft SWEIS. Marion Fulk, a retired physicist from Livermore Lab, asked at the Tracy public hearing on April 28, 2004, for a definition of this unit. Apparently, no one on the panel could define this term in response to his question.

**VIII. CONCLUSION**

The deficiencies raised by the Defense Nuclear Facilities Safety Board, the General Accounting Office and the National Academies of Science -- along with other experts cited and our own comments -- must be carefully considered by DOE in a new Draft SWEIS. In addition, the Draft SWEIS must be re-circulated to the public to allow comment on the new information.

103/31.06  
CONT.

104/31.04

## Tri-Valley CAREs

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105/04.01

The Draft SWEIS reveals a smorgasbord of significant projects that are generally both environmentally dangerous and proliferation-provocative. These projects, taken together, move LLNL's mission toward nuclear manufacture -- and make LLNL a more nuclear material intensive institution. At the same time, the communities around the LLNL main site and site 300 continue to grow and become more urbanized. We are concerned that this could be a recipe for disaster.

106/07.01

We must insist that DOE take this opportunity to revise the Draft SWEIS by including an alternatives section that looks at other reasonable futures for LLNL -- including an alternatives analysis that discusses terminating LLNL's plutonium mission and one that analyzes a shift toward civilian science initiatives. We also call on DOE to forgo the proposed actions outlined in this Draft SWEIS and to bring the proposed Bio-safety Level-3, further nuclear weapons development and the NIF programs to a close.

107/31.02

Further, due to the complexity and technical nature of the information, the more than 2,000 pages in the document and the hundreds of members of the public who first encountered the Draft SWEIS at the public hearings held on April 27, 28 and 30, 2004, we again request that DOE extend by one month the period during which it will consider written comments. Or, failing that, we ask DOE to reopen the comment period and provide ample outreach to let the public know of the new comment opportunity.

Sincerely,

Marylia Kelley,  
Executive Director

Loulana Miles,  
Staff Attorney

Inga Olson,  
Program Director

Tara Dorabji,  
Outreach Director

Peter Strauss,  
Technical Consultant

Matthew Liebman,  
Legal Intern

On behalf of the Tri-Valley CAREs board, staff and membership  
Office address: Tri-Valley CAREs, 2582 Old First Street, Livermore, CA 95551  
Phone: (925) 443-7148 • Fax: (925) 443-0177 • Web: [www.trivalleycares.org](http://www.trivalleycares.org)

U.S. Department of the Interior, Patricia Sanderson Port,  
 Regional Environmental Officer  
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U.S. Department of Peace Coalition, Prof. Marjorie Zamora and  
 Peacemakers Action Coalition, Alan Sinclair  
 Page 1 of 1



United States Department of the Interior  
 OFFICE OF THE SECRETARY  
 Office of Environmental Policy and Compliance  
 1111 Jackson Street, Suite 520  
 Oakland, California 94607-4807

June 2, 2004

ER 04/330

Mr. Thomas Grim, Document Manager  
 National Nuclear Security Administration, Livermore Site Office, L-293  
 7000 East Avenue  
 Livermore, CA 94550-9234

Subject: Draft Site-Wide Environmental Impact Statement (DEIS) for Continued  
 Operation of Lawrence Livermore National Laboratory and Supplemental  
 Stockpile Stewardship and Management Programmatic EIS, Livermore, Alameda  
 County, California

Dear Mr. Grim,

The U.S. Department of the Interior has received and reviewed the subject document and has no  
 comments to offer.

Thank you for our opportunity to review this project.

Sincerely,



Patricia Sanderson Port  
 Regional Environmental Officer

cc: Director, OEPC, D.C.  
 FWS, Portland

NO COMMENTS IDENTIFIED IN THIS SUBMITTAL

Stop the Weaponization of Space Press Release  
 For distribution 27 April 2004

*"The destruction of the enemy is the destruction of yourself"  
 "We and they are no longer there, they are also part of we, and we are also part  
 of they." H.H. Dalai Lama. Toronto April 2004.*

1/02.01 The US already has thousands of nuclear weapons, enough to wipe us all out  
 When the USSR was seen as a threat, this was used as a deterrent – a deterrent  
 called "MAD", for "Mutually Assured Destruction." Threats are different now, but  
 the idea of making more nuclear weapons is still just MAD. More than that, it's a  
 unrealistic plan. You cannot make the world safer by developing nuclear  
 weapons. They only add to the risks.

2/23.01 The risks of nuclear weapon development are both obvious and hidden. The  
 obvious risks you all know, the hidden ones are of an ever-more toxic  
 environment, and permanent damage to our children. There is no excuse for  
 this. Radiation toxicity levels in Livermore homes have been rising for decades,  
 and now the Department of Energy wants to increase the nuclear activity.

3/32.03 And not only that, there are plans to base weapons in space, hurtling round the  
 earth, our mother, all the time. Space is free of weapons now, but later this year  
 the Administration will begin launching armed satellites. We must stop this –  
 there's still time to stop it. The Preservation of Space Act HR 3657 prohibits  
 putting weapons in space. Push your representatives to pass the bill.

The Preservation of Space Act provides for international treaties to ban space  
 weapons. We are working to get twenty countries to sign the treaties. It's not too  
 late, but we have to act **NOW**

For more information:  
 Prof Marjorie Zamora  
 US Department of Peace Coalition  
 www.dopc.us  
 1-708-246-7363

Alan Sinclair  
 Peacemakers Action Coalition  
 831-425-2807

U.S. Environmental Protection Agency, Lisa B. Hanf, Manager,  
 Federal Activities Office  
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**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
 REGION IX  
 75 Hawthorne Street  
 San Francisco, CA 94105

May 27, 2004

Thomas Grim  
 National Nuclear Security Administration  
 U.S. Department of Energy - Livermore Site Office (L-293)  
 700 East Avenue  
 Livermore, CA 94550

**Subject:** Draft Environmental Impact Statement (DEIS), Site-wide Continued Operation of Lawrence Livermore National Laboratory (LLNL) and LLNL Site 300, Alameda and San Joaquin Counties, California (CEQ #040086), and Programmatic Draft Supplemental EIS (PDSEIS), Stockpile Stewardship and Management Plan, Use of Proposed Materials, LLNL National Ignition Facility, Alameda County, California (CEQ #040087)

Dear Mr. Grim:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's (CEQ) NEPA Implementing Regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Our detailed comments are enclosed.

EPA has had previous involvement with the two EISs and these sites. EPA sent scoping comments on a Notice of Intent to prepare a site-wide DEIS on August 2, 2002, following our July 8, 2002 letter providing information on cooperating agencies. EPA sent comments on a Stockpile Stewardship Programmatic DEIS on May 7, 1996, rating it Environmental Concerns - Insufficient Information (EC-2) due to accident risk analyses and environmental justice impacts. EPA's December 13, 1996 letter on the Stockpile Stewardship Programmatic Final EIS stated that our May 7, 1996 concerns were addressed. EPA sent comments on a Stockpile Stewardship Supplemental EIS on July 31, 2003, rating it Lack of Objections but seeking clarification on radionuclides in wells. EPA also conducted a multi-media inspection of LLNL from November 4 to 7, 2003. A Compliance Evaluation Inspection Report was provided to LLNL on May 21, 2004.

EPA's review of the subject DEIS/PDSEIS identifies environmental concerns with: (1) LLNL's Spill Prevention, Control, and Countermeasure capabilities; (2) mitigation to reduce radionuclide emissions and construction-related air quality impacts; (3) environmental contaminants; and (4) accident-related issues. EPA rates the DEIS/PDSEIS and each EIS's Proposed Action as EC-2. Please see the enclosed "Summary of EPA Rating Definitions" for further information on our rating system.

U.S. Environmental Protection Agency, Lisa B. Hanf, Manager,  
 Federal Activities Office  
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1/31.03, 26.02

EPA notes that, for each project, the DEIS/PDSEIS fully evaluates three alternatives-- No Action, the Proposed Action, and a Reduced Operation Alternative. The two EISs are integrated in one document, an approach used infrequently by Federal agencies. With the limited exception of Appendix M, the analysis for both projects is integrated throughout the document. Although the DEIS/PDSEIS comprehensively evaluates impacts to resources at LLNL and Site 300, it does not distinguish each project's specific contribution to overall environmental impacts (see Chapter 5, Volume I). Because both projects' alternatives and affected resources are identical, it is unclear whether the final preferred alternatives for each project are interdependent, and whether selecting the Proposed Action for one project precludes selecting No Action or a Reduced Operation Alternative for the other project. Accordingly, the Final EIS/Programmatic Final SEIS (FEIS/PFSEIS) should clarify the relationship between each project's final preferred alternative; disclose impacts of reasonable scenarios that have not been addressed; and identify how decision-making for the respective projects is expected to proceed (e.g., a joint NEPA Record of Decision or two separate NEPA Records of Decision).

We appreciate the opportunity to comment. Please send one copy of the FEIS/PFSEIS to the letterhead address (mailcode: CMD-2) when available. If you have questions, please contact my staff reviewer, David Tomsovic, at 415-972-3858 or <tomsovic.david@epa.gov>.

Sincerely,  
  
 Lisa B. Hanf, Manager  
 Federal Activities Office

Enclosures: 4  
 "Summary of EPA Rating Definitions"  
 EPA's Detailed Comments  
 May 21, 2004 EPA Letter to LLNL  
 April 12, 2004 Defense Nuclear Facilities Safety Board Letter to NNSA

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**SUMMARY OF EPA RATING DEFINITIONS**

This rating system was developed as a means to summarize EPA's 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 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 must 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 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."

U.S. EPA Comments - Draft Environmental Impact Statement (DEIS) for Site-wide Continued Operation, Lawrence Livermore National Laboratory (LLNL) and LLNL Site 300, and Programmatic Draft Supplemental EIS (PDSEIS) for Stockpile Stewardship and Management Plan for Use of Proposed Materials, National Ignition Facility, LLNL - May 27, 2004

**Regulatory Inspections**

Volume 1 (pp. 7-10 to 7-12) addresses regulatory inspections conducted by State and local authorities at LLNL through October 2002. EPA conducted a multi-media inspection at LLNL from November 4 to 7, 2003 to determine the facility's compliance with Federal environmental requirements including:

- Oil Pollution Act (OPA) Spill Prevention, Control and Countermeasure (SPCC) Plan;
- Clean Air Act (CAA) National Emission Standards for Hazardous Air Pollutants (NESHAP) - radionuclides;
- Resource Conservation and Recovery Act (RCRA) hazardous waste regulations and RCRA Section 6002;
- RCRA Underground Storage Tank (UST); and,
- Emergency Planning and Community Right-to-Know Act (EPCRA) except Toxic Release Inventory (TRI) provisions.

2/31.07

EPA also undertook a multi-media "screening" to identify potential deficiencies with other Federal environmental requirements, specifically:

- Clean Water Act (CWA) storm water;
- EPCRA TRI;
- Safe Drinking Water Act (SDWA) Underground Injection Control (UIC);
- CAA ozone-depleting Class I and Class II substances; and,
- CAA chromium NESHAP.

EPA issued a Compliance Evaluation Inspection Report which identifies opportunities to strengthen LLNL's compliance with Federal environmental requirements (EPA's May 21, 2004 letter to LLNL is enclosed). EPA's inspection found that LLNL's 1995 SPCC Plan is not current as required by 40 CFR Part 112. Federal regulations require that SPCC plans be periodically evaluated for accuracy and completeness. If significant facility changes occur, an SPCC plan needs to be amended.

EPA determined that the description of aboveground oil storage locations in the 1995 SPCC Plan does not correspond to the facility's current tank inventory. LLNL is thus required to prepare an amended SPCC Plan by August 17, 2004 reflecting changes in facility operations. An update of LLNL's SPCC Plan and other issues in EPA's Compliance Evaluation Inspection Report are relevant to actions proposed in the DEIS/PDSEIS.

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2/31.07  
cont.

Recommendations: The Final EIS/Programmatic Final Supplemental EIS (FEIS/PFSEIS) should discuss EPA's multi-media inspection at LLNL, and address how EPA's findings and recommendations would be incorporated in the fully evaluated alternatives. In particular, the FEIS/PFSEIS should evaluate how LLNL would address compliance with SPCC regulations. If available, the findings and recommendations of any other environmental compliance inspections at LLNL and Site 300 since October 2002 should be reflected in the FEIS/PFSEIS.

Air Quality

Reducing Radiological Emissions and Pollution Prevention

The DEIS/PDSEIS states, "LLNL adheres to stringent requirements to ensure that air emissions are mitigated to the extent practicable throughout the design, review, and implementation phases of modification activities." (Vol. I, p. 5.3-26 - *italics added*). The DEIS/PDSEIS does not address if this objective applies to radiological emissions at LLNL and Site 300. Although EPA's November 2003 inspection found that LLNL's radiological emissions comply with the radionuclide NESHAP regulations, the DEIS/PDSEIS does not address whether radiological emissions at LLNL and Site 300 are mitigated to the extent practicable from "cradle to grave" (e.g., inventory management; research and development; stack emissions; and production, processing and testing activities). To give one example, the DEIS/PDSEIS does not evaluate whether an extended lifespan for open air firing tables, which are projected to "far exceed" shots at a Contained Firing Facility "for the foreseeable future," could be minimized to reduce radiological emissions (see Table 5.3.10.1-1).

3/17.04

The Council on Environmental Quality (CEQ) states, "All relevant, reasonable mitigation measures that could improve the project are to be identified...Once the proposal itself is considered as a whole to have significant effects...mitigation measures must be developed where it is feasible to do so." (CEQ, March 23, 1981, Forty Most Asked Questions on CEQ's NEPA Regulations). CEQ has issued guidance on including pollution prevention measures in NEPA documents (CEQ, January 12, 1993, Pollution Prevention and NEPA).

Recommendations: The FEIS/PFSEIS should evaluate the feasibility of mitigation to reduce radiological emissions to the extent practicable at LLNL and Site 300. Should this mitigation be feasible, include appropriate commitments in the NEPA Record(s) of Decision.

Quantifying and Mitigating Construction Emissions

Volume I (p. 4-10-8) states that the San Francisco Bay Area and the San Joaquin Valley are "nonattainment" for the Federal ozone standard. The San Joaquin Valley is also classified as nonattainment for the Federal standard for particulate matter less than 10 microns in diameter (PM-10).

4/17.03

4/17.03  
cont.

Volume I addresses emissions from constructing or modifying facilities (pp. 5.1-6 and 5.1-7). This section states that the Bay Area Air Quality Management District (BAAQMD) places a greater importance on controls rather than detailed quantification of construction emissions. The DEIS/PDSEIS states, "From the district's perspective, quantification of construction emissions is not necessary; the determination of significance with respect to construction emissions should be based on consideration of the control measures to be implemented." (p. 5.1-7). Construction emissions are thus not quantified.

The BAAQMD has a three-tier set of measures to reduce PM-10 emissions from construction (Vol. I, p. 5.1-7). The DEIS/PDSEIS does not identify what measures would be implemented at LLNL and Site 300 to reduce PM-10 emissions. It does not evaluate the feasibility of other relevant mitigation to reduce other construction emissions, including hydrocarbons (HC), volatile organic compounds (VOC), carbon monoxide (CO), oxides of nitrogen (NOx), and diesel particulate matter (DPM). Mitigation measures to reduce emissions of VOC and NOx are particularly appropriate since they are ozone precursors, while DPM is an air toxic. The following mitigation measures may reduce construction-related emissions:

- Reducing emissions of DPM and other air pollutants by using particle traps or other methods. Control technologies such as traps control approximately 80 percent of DPM. Specialized catalytic converters (oxidation catalysts) control approximately 20 percent of DPM, 40 percent of CO emissions, and 30 percent of HC emissions.
- Ensuring that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use.
- Prohibiting engine tampering to increase horsepower.
- Locating diesel engines, motors, and equipment as far as possible from residential areas and sensitive receptors.
- Requiring low sulfur diesel fuel (<15 parts per million) if available.
- Reducing construction-related trips of workers and equipment, including trucks.
- Leasing or buying newer, cleaner equipment (1996 or newer model), using a minimum of 75 percent of the equipment's total horsepower.
- Using engine types such as electric, liquified gas, hydrogen fuel cells, and/or alternative diesel formulations.
- Adopting a "Construction Emissions Mitigation Plan" to monitor construction-related emissions.
- Working with the air pollution control districts to develop the best available mitigation for reducing construction-related emissions at LLNL and Site 300.

Several Federal agencies have included construction-related air quality mitigation measures in their proposed actions under NEPA. For example, the National Aeronautics and Space Administration (NASA) adopted such measures in its NEPA Record of Decision for *NASA Ames Development Plan, California*. Incorporating such mitigation in the two projects can strengthen the Federal role in environmental leadership and pollution prevention.

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4/17.03 cont.	<p>Recommendations: The FEIS/PFSEIS should quantify, for each criteria pollutant, the reasonably foreseeable construction emissions for the fully evaluated alternatives. Quantifying reasonably foreseeable construction emissions informs the public and decision-makers on the project's air quality impacts and helps to identify appropriate mitigation at each site for nonattainment pollutants. The FEIS/PFSEIS should evaluate the feasibility of mitigation measures to reduce construction emissions (e.g., PM-10, DPM, CO, VOC, HC and NOx), and include appropriate commitments in the NEPA Record(s) of Decision.</p>
5/18.01, 04.02	<p><b>Environmental Contaminants</b></p> <p><b>Monitoring at Energetic Materials Processing Center</b> A proposed Energetic Materials Processing Center (EMPC) includes a processing facility and four magazines— two storing 1,000 pounds of high explosives and two storing 500 pounds of explosives (p. 3-10, Vol. 1). Groundwater at Site 300's existing high explosives area (Building 812) is contaminated with hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX), perchlorate, nitrate, and trichloroethene. The DEIS/PDSEIS does not evaluate the feasibility of monitoring proposed activities at the EMPC to ensure that potential contamination, including groundwater contamination, is avoided to the fullest extent practicable.</p> <p>Recommendation: The FEIS/PFSEIS should discuss the feasibility of monitoring proposed activities at the EMPC to ensure that potential contamination is avoided to the fullest extent practicable.</p>
6/17.06	<p><b>Open Air Shots</b> Shots on open air firing tables at Site 300 are projected to "far exceed" shots at a Contained Firing Facility "for the foreseeable future" (Table 5.3.10.1-1). The DEIS/PDSEIS does not address what pollutants are released as a by-product of these shots, nor address a proposed disposal method for shot-related debris. The DEIS/PDSEIS does not address whether the number of open air shots can be reduced in the "foreseeable future." It does not address impacts on the Department of Energy's environmental restoration commitments under the Comprehensive Environmental Response, Compensation, and Liability Act and/or the Resource Conservation and Recovery Act.</p> <p>Recommendations: The FEIS/PFSEIS should, for each fully evaluated alternative, address what pollutants are released during shot testing, the proposed method of disposal for shot debris, the feasibility of reducing the number of open air shots, and reasonably foreseeable impacts on environmental restoration activities.</p>
7/17.01	<p><b>Tritium Emissions from Hydroshots</b> Volume 1 (p. 3-15) addresses tritium emissions from hydroshots at Site 300. The DEIS/PDSEIS does not address, for the three fully evaluated alternatives, the expected frequency and type(s) of radiological releases, and reasonably foreseeable impacts on existing groundwater and soil</p>

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7/17.01 cont.	<p>mitigation measures.</p> <p>Recommendation: For each fully evaluated alternative, the FEIS/PFSEIS should discuss the expected frequency and type(s) of radiological releases, and reasonably foreseeable environmental impacts.</p>
8/25.07	<p><b>Inadvertent Events and Accidents</b></p> <p><b>Potential Radiological Releases at Building 332</b> Volume 1 (5.5. Bounding Accident Scenarios) addresses reasonably foreseeable human health effects under No Action, the Proposed Action, and a Reduced Operation Alternative from potential radiological, chemical, high explosive, and biological accidents. Since release of the DEIS/PDSEIS, the Defense Nuclear Facilities Safety Board (DNFSB), an independent Federal agency, issued findings and recommendations regarding LLNL's proposed safety basis for Building 332 (Plutonium Facility). An April 12, 2004 DNFSB letter to the National Nuclear Security Administration (NNSA) identified "significant deficiencies" in LLNL's proposed safety basis for the Plutonium Facility (copy of DNFSB's letter enclosed). The DNFSB's letter raised concern regarding the potential for an "unfiltered release of radioactive materials from the facility [i.e., Building 332] during certain accident scenarios." The DNFSB informed the NNSA that this "reduces the margin of safety and the defense-in-depth currently provided for protection of the public, collocated workers, and other on-site individuals."</p> <p>Recommendation: The FEIS/PFSEIS should evaluate if potential modifications of LLNL's facility operations are warranted based on the DNFSB's recent findings and recommendations. If so, the NEPA Record(s) of Decision should incorporate appropriate mitigation and/or monitoring.</p>
9/25.06	<p><b>Presenting Data on Inadvertent Events at LLNL and Site 300</b> Appendix C-32 to C-36 is a chronology of worker accidents at LLNL from 1996 to 2001. We commend having this valuable information in the DEIS/PDSEIS. Table 7.4-1 provides a summary of "inadvertent events" at LLNL in 2002. Although we support including data on inadvertent events, it is unclear why only one year's data was given rather than five years, as provided for worker accidents.</p> <p>Recommendation: The FEIS/PFSEIS should include inadvertent events data for the five most recent years at LLNL and Site 300.</p>

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

MAY 21 2004

Suzi Jackson, Leader  
Operations and Regulatory Affairs Division  
Lawrence Livermore National Lab (Mail Stop L-633)  
P.O. Box 808  
Livermore, CA 94551

Dear Ms. Jackson:

Enclosed is the U.S. Environmental Protection Agency's (EPA) Compliance Evaluation Inspection Report for the Lawrence Livermore National Laboratory (LLNL), based on the inspection performed by EPA from November 4 through 7, 2003. Although the inspection report notes several potential violations, it appears that LLNL has corrected or is in the process of correcting these matters of noncompliance. Whether any further enforcement action as a result of these potential violations will be sought is a question left for individual EPA media programs to decide as they deem appropriate. Any omissions in the inspection report shall not be construed as a determination of compliance with applicable regulations.

The enclosed report identifies potential violations of the Resource Conservation and Recovery Act (RCRA), California's authorized program under RCRA Subtitle C, and the Spill Prevention Control and Countermeasure (SPCC) requirements of the Oil Pollution Act. LLNL's return to compliance with respect to the potential RCRA violations was observed by EPA during the inspection. To remedy its noncompliance with respect to the potential SPCC violations, LLNL must update the SPCC Plan to reflect changes in facility operations and modify the inspection program for double walled aboveground storage tanks. For a more specific discussion of the changes necessary, see Section 5.1 of the report. LLNL is not required to submit documentation of its return to compliance with respect to the potential SPCC violations, but EPA expects that these revisions to the SPCC Plan will be made immediately, and EPA will verify that LLNL has made the necessary changes in a subsequent SPCC inspection.<sup>1</sup>

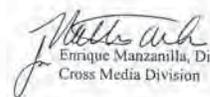
<sup>1</sup> Note that, on July 17, 2002, EPA issued a final rule amending the Oil Pollution Prevention regulations contained in 40 C.F.R. Part 112. The rule changes were intended primarily to clarify the language and organization of the regulations. Information regarding these new regulations, as well as the compliance date for them, may be found by visiting EPA's web page at "www.epa.gov/oilspill." As a result, LLNL must prepare an amended SPCC Plan conforming with these new regulations on or before August 17, 2004.

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EPA routinely provides copies of investigation reports to agencies not copied on this letter and, upon request, to the public. Such releases are handled according to the Freedom of Information Act's implementing regulations (40 CFR Part 2). If LLNL believes this report contains privileged or confidential information, it may make a claim within fourteen (14) calendar days from the date of this letter. EPA will construe LLNL's failure to furnish a timely claim as a waiver of the confidentiality claim.

EPA would like to take this opportunity to acknowledge the cooperation provided by LLNL staff during the multimedia inspection. If LLNL staff have any questions regarding this report, please have them contact Tom Kelly at 415-972-3856.

Sincerely,

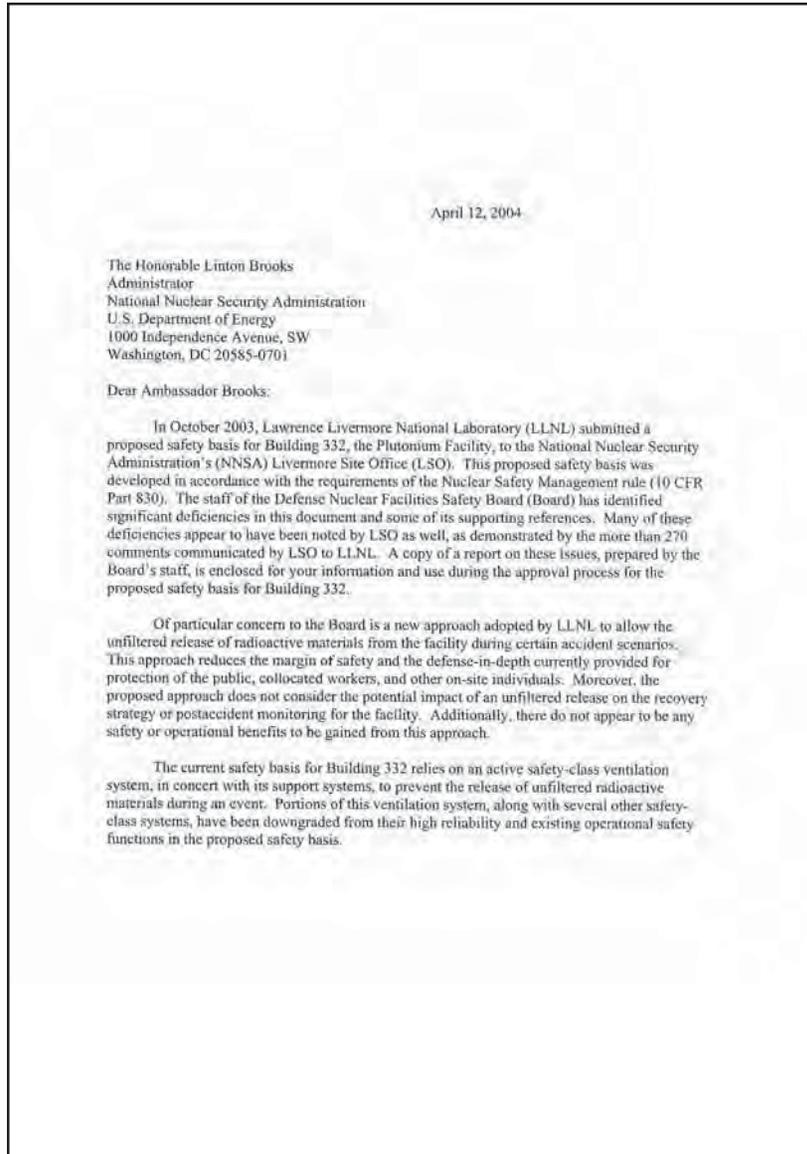


Enrique Manzanilla, Director  
Cross Media Division

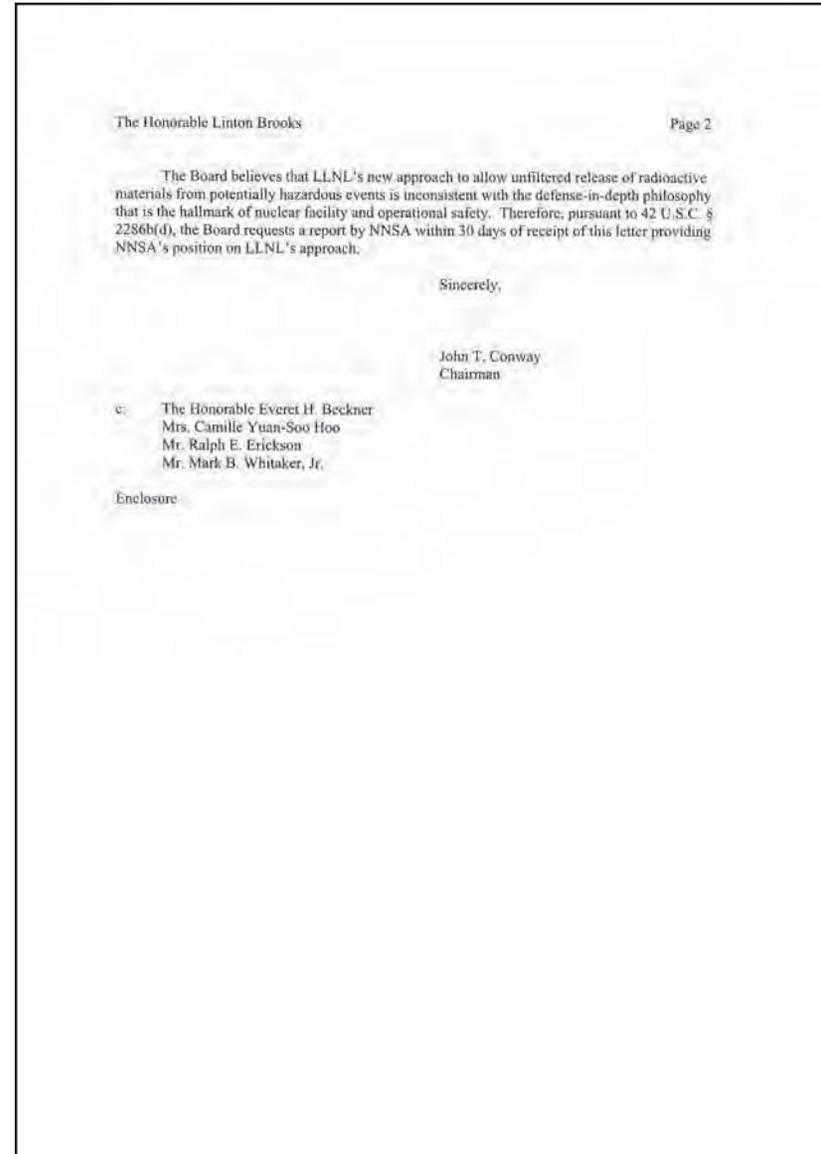
Enclosure: Compliance Evaluation Inspection Report for Lawrence Livermore National Laboratory, Livermore, California

cc: Phil Hill, Department of Energy  
Susan Hugo, Alameda County Health Agency  
Charles McLaughlin, State Regulatory Program Division, DTSC

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### Staff Issue Report

March 17, 2004

**MEMORANDUM FOR:** J. K. Fortenberry, Technical Director

**COPIES:** Board Members

**FROM:** F. Bamdad  
D. Kupferer

**SUBJECT:** Safety Basis Review at Lawrence Livermore National Laboratory

The staff of the Defense Nuclear Facilities Safety Board (Board) visited Lawrence Livermore National Laboratory (LLNL) on March 1-4, 2004, to continue its review of the safety basis for Building 332, the Plutonium Facility. The review included an update on activities conducted in response to previous findings communicated by the Board to the National Nuclear Security Administration (NNSA) in a letter dated April 10, 2003, as well as discussions on the proposed Documented Safety Analysis (DSA) submitted to NNSA's Livermore Site Office (LSO) in October 2003. Staff members W. Andrews, F. Bamdad, D. Kupferer, A. Matteucci, and M. Merritt participated in this review.

**Response to the Board's Letter.** In response to findings contained in the Board's letter dated April 10, 2003, related to implementation of the Conditions of Approval (COAs) of the safety bases, LSO has taken an aggressive role in ensuring that all COAs are identified and tracked to satisfactory closure. Unfortunately, because of limited resources, only a fraction of the COAs had been verified as closed by the time of this review. LSO has committed to verifying closure of all of the COAs before approving the proposed DSA.

In response to the Board's letter dated April 10, 2003, LLNL performed a survey of some of its non-nuclear facilities to identify needs and methodologies for improving the chemical materials inventory tracking system known as CHEMTRAC. As a result, LLNL is taking steps to enhance CHEMTRAC to make it a transaction-based system, as well as changing the software so that the system will be health/consequences-based. That is, real-time inventory tracking will be implemented at each facility to ensure that threshold limits based on hazardous consequences will not be exceeded.

**Building 332 Safety Basis.** LLNL submitted a DSA to LSO for review and approval in accordance with the requirements of the Nuclear Safety Management rule (10 CFR Part 830). The Board's staff reviewed this document and some of its supporting references, and met with LLNL and LSO representatives to discuss its observations. The following is a summary of some of the issues discussed during these meetings. Many of these issues appear to have been noted by LSO, as demonstrated by the more than 270 comments communicated by LSO to LLNL.

**Overview**—Major components of four safety-class systems in the current Building 332 Safety Analysis Report have been downgraded to safety-significant in the proposed DSA. The four downgraded systems are (1) the emergency power system, (2) portions of the glovebox

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ventilation system, (3) portions of the room ventilation system, and (4) portions of the fire detection and suppression system. Some components of these systems (e.g., the uninterruptible power supply) have been further downgraded to non-safety-level. This action could degrade the defense-in-depth posture of the Plutonium Facility.

**Identification and Analysis of Hazards**—LLNL used a methodology from safe harbors identified in 10 CFR Part 830 to prepare the DSA, but used an in-house procedure to identify and analyze the hazards associated with the activities performed in Building 332. LLNL conducted a systematic walkdown of the facility; identified approximately 60 hazard types; and proposed potential controls to protect the public, workers, and the environment. Some of the controls were classified as safety-significant since they were designated to protect workers from fatality, serious injury, or hospitalization. The hazard analysis summary tables in the proposed DSA list both engineered and administrative controls. The tables also distinguish between controls that are credited as safety controls and those that are not.

In reviewing the DSA, the Board's staff learned that LSO had directed LLNL to continue preparing the DSA without implementing Change Notice 2 of the Department of Energy (DOE) DOE Standard 3009-94, *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Documented Safety Analyses*—although the notice was issued in April 2002, nearly 18 months prior to completion of the proposed DSA. Change Notice 2 specifies that safety-significant controls must be identified to protect workers from significant radiological or chemical hazards, in addition to those controls selected to prevent worker fatalities and injuries. LSO's decision may have resulted in less than adequate protection of workers from hazardous activities. LSO representatives are requesting that LLNL develop a schedule to incorporate Change Notice 2 into all DSAs.

**Accident Analysis**—LLNL is pursuing a new approach to accident analysis in that potentially harmful consequences to the public are mitigated by the structural boundaries of Building 332, which is assumed to reduce the unmitigated release of radioactive materials. In the past, Building 332 relied on a safety-class active ventilation system to ensure that the radioactive materials released during an accident, such as a fire, would be forced through a series of high-efficiency particulate air (HEPA) filters before being released to the outside environment. Under LLNL's new approach, it is assumed that the building's leak paths would physically reduce the release of unfiltered contaminated air from the facility.

Validation of LLNL's new approach requires analytical modeling of the building's leak paths to the outside, and estimation of the percentage of any radioactive materials that would be released unfiltered (leak path factor (LPF)) after an accident. An LPF of 5 percent, as assumed in the proposed DSA, would result in public dose consequences that LLNL believes should be acceptable. In the DSA, for example, the unmitigated consequence (LPF of 100 percent) of a fire resulting from a hydrogen deflagration is estimated to be about 18 rem at the site boundary. As calculated in the DSA, this same deflagration scenario would result in an unfiltered, mitigated dose consequence of about 1 rem to the public, based on an LPF of 5 percent. As a result, the

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DSA downgrades portions of the active ventilation system and its supporting equipment, such as the emergency power supply, from its current safety-class to safety-significant status.

The Board's staff reviewed the LPF analysis and discussed it in detail with its authors and LLNL representatives. Several assumptions in the analysis are unrealistic and inconsistent with other authorization basis documents and facility procedures:

- d. In the LPF analysis, the facility is modeled by several nodes or compartments, connected via junctions or flow paths for the door cracks and other potential openings of the building. This model fails to account for the additional leak paths that would result from the use of emergency exit doors by Building 332 personnel as they evacuate the facility during a fire. Evacuation is essential for worker protection, as described in the facility-specific Fire Hazard Analysis. Therefore, the calculated LPF of 5 percent is unrealistic and probably underestimates the extent of a release of unfiltered radioactive material from the facility.
- e. The LPF calculations are based on a fire scenario that lasts for only 30 minutes, with the entire event assumed to end after 2 hours. In reality, such an event could continue for days until any airborne radioactive material released by the fire into the internal facility atmosphere had either been removed by settlement, released to the outside environment, or removed through other remedial actions. The reason for this is that airborne radioactive material released during a fire would remain trapped within the confines of the facility because of the lack of filtration by an active ventilation system. Eventually, material would leak to the outside environment through diurnal effects, wind impact on the building, or other natural phenomena. These phenomena are either not modeled or incorrectly analyzed, and their important effect on the long-term breathing of the facility is not properly accounted for in the calculation of the LPF.
- f. The computer program manual used to calculate the LPF—CONTAIN—has cautionary notes with regard to its use for modeling. These notes recommend performing sensitivity analyses on important input parameters (e.g., the size of a time step) to prevent incorrect conclusions. Such sensitivity analyses have not been performed in support of the LPF calculations for the proposed DSA, and it is not clear whether conservative input parameters are used in the analyses.

Furthermore, it does not appear that LLNL has considered the potential impact of the new passive mitigation approach on any accident recovery strategy or postaccident monitoring for the facility. Without being able to depend on the use of an active ventilation system to guide the flow of air through the HEPA filters after an event, it is conceivable that the spread of contamination throughout the facility could jeopardize the facility's recovery and future use. An unfiltered release through the unmonitored pathways would also prevent the postaccident monitoring of radioactive materials released to the environment.

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*Identification and Implementation of Controls*—Identification of appropriate boundaries for safety controls and their support systems is a shortcoming in both the existing safety basis and the proposed DSA for Building 332. For example, the fire detection and alarm system is identified as safety-significant to protect workers from the potential consequences of a fire in the facility. The heat and smoke detectors, the MXL<sup>®</sup> control panel and its associated power supply, and the flow switches are defined as being within the boundaries of the fire detection and alarm system. However, the annunciation system has not been defined as being within the boundaries of the fire detection and alarm system, and therefore has no safety designation. It is not clear how workers can be notified so they can take appropriate action if the annunciation system has failed. Furthermore, in December 2002, the emergency voice alarm system, which is part of the annunciation system, was identified as not meeting the requirements of National Fire Protection Association (NFPA) 72, *National Fire Alarm Code*, in the facility's Fire Hazard Analysis. No action appears to have been taken to remedy this situation. Similarly, the fire suppression system is identified as safety-class, but none of the supporting water supply systems have a safety-related designation—the tertiary fire water tanks in the basement are classified as defense-in-depth. It would be prudent to classify the tertiary fire water tanks as safety-significant and part of the fire suppression system boundaries.

The descriptions of some of the controls in the proposed DSA are very vague; in particular, some engineered features that are relied upon for worker safety are poorly defined and may be difficult to implement. For example, the DSA defines many controls as Equipment Design without specifying the type of equipment or how it would protect workers. This lack of detail in the DSA could lead to several safety-related shortcomings:

- Workers could be inadequately protected because of a lack of knowledge of the specific control that needs to be implemented.
- Poorly defined controls could be removed from a procedure inadvertently resulting in a less-than-desirable safety posture.
- Future unreviewed safety question (USQ) determinations could be inconclusive or incorrect because the controls that may be subject to the USQ process are not clearly defined.
- Sections 830.122(e)(1) and 830.201 of the Nuclear Safety Management rule require that the controls identified in the DSA be implemented by the contractor when the associated activities are performed. Lack of detail in defining the controls could result in insufficient information for LLNL to demonstrate compliance with the rule.

In other instances, credit has been taken for safety-significant equipment preventing hazards without proper functional classification. For example, the glovebox water-cooling system is credited with protecting the surface of the glovebox and reducing the heat load from a molten plutonium spill. However, the glovebox water-cooling system is not identified as safety-

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Federal Activities Office  
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U.S. Senate, Barbara Boxer, U.S. Senator  
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significant.

The Board's staff also identified some administrative controls that are inconsistent with the supporting calculations in the proposed DSA. For example, the potential for a solvent explosion event is substantially reduced by limiting the amount of flammable materials in a glovebox. The administrative limits in the Technical Safety Requirements (TSR) document, however, are not consistent with the conclusions in the DSA reference calculations. Additionally, the safety-related administrative controls are not identified as such in the proposed DSA. Such administrative controls are subject to DOE's Implementation Plan for the Board's Recommendation 2002-3, *Requirements for Design, Implementation, and Maintenance of Administrative Controls*, for potential future enhancements.

Some safety management programs, identified in both the existing and proposed TSRs, do not appear to have been properly implemented. For example, TSR Administrative Control 5.11 requires that a program be established, implemented, and maintained to ensure that the conditions identified in Table 5-7 of the proposed DSA<sup>1</sup> are maintained in the facility. Administrative Control 5.11 defines five key attributes to be included in the program. The attributes identified in the TSRs would enhance programmatic implementation of the administrative controls, as is the focus of Recommendation 2002-3. This program is also identified in the current approved TSRs; however it does not appear to have been implemented.

<sup>1</sup> This Table 5-7 does not appear to exist in the proposed DSA.

BARBARA BOXER  
CALIFORNIA

United States Senate

HART SENATE OFFICE BUILDING  
SUITE 112  
WASHINGTON, DC 20510-0505  
202 224-3333  
<http://www.senate.gov/contact>

COMMITTEES:  
COMMERCE, SCIENCE  
AND TRANSPORTATION  
ENVIRONMENT  
AND PUBLIC WORKS  
FOREIGN RELATIONS

May 24, 2004

The Honorable Spencer Abraham  
U.S. Department of Energy  
1000 Independence Ave., SW  
Washington, DC 20585

Dear Secretary Abraham:

I am writing on behalf of my constituents in California to request a 30-day extension for the public comment period for the Site-Wide Environmental Impact Statement (SWEIS) for the Lawrence Livermore National Laboratory (LLNL).

1/31.02

It is my understanding that the SWEIS is a lengthy document over 2,000 pages long. Because of the amount of technical detail in the SWEIS, I believe that a 30-day extension for review is necessary for the public to thoroughly comprehend the impacts of the SWEIS' recommendations, and to send in written comments to the Department of Energy.

I encourage the Department of Energy to extend the public comment period for the review of the SWEIS for the Lawrence Livermore National Laboratory from May 27, 2004 to June 26, 2004. Should you have any questions, please contact Jennifer Tang at (415) 403-0116. Thank you for your consideration.

Sincerely,

Barbara Boxer  
United States Senator

BB:jbr

cc: Administrator Linton Brooks, Department of Energy, National Nuclear Security Administration  
Tom Grim, Department of Energy, National Nuclear Security Administration

1700 MONTEGOMERY STREET  
SUITE 240  
SAN FRANCISCO, CA 94111  
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SACRAMENTO, CA 95814  
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301 NORTH W STREET  
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PRINTED ON RECYCLED PAPER

Vernieu, Peggy  
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Peggy Vernieu  
2508 Ridge Road  
Berkeley, CA 94709

May 28, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Thank you for the opportunity to express my concerns regarding security, environmental, and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

I am writing in response to the DOE's draft of a Site Wide Environmental Impact Statement (SWEIS). I live in Berkeley and am horrified by what I have read of the plans for nuclear proliferation in my backyard.

Here are my comments and questions regarding six horrifying programs proposed for Livermore Lab.

- 1/08.02 1. Doubling the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. I feel strongly that the current inventory should be decreased, not increased. It is only a matter of time before another big earthquake hits the area. Another Al-Qaeda strike is expected this summer. Now that we've seen the towers of the World Trade Center crumble, isn't it hubris to think that human beings are capable of building something strong enough to house this plutonium completely secure from such threats?
- 2/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS). This scheme involves heating and vaporizing plutonium and then shooting multiple laser beams through the hot vapor to separate out plutonium isotopes. Why are we reviving a project that was canceled more than 10 years ago because it was dangerous and seemed futile? I understand that to conduct these experiments, the lab would need to increase the amount of plutonium that can be used at one time in any one room from 44 to 132 pounds. Isn't this a highly extravagant use of plutonium? I do not think this expense, let alone the added security and safety risks, can be justified.
- 3/26.01, 26.03 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. I am strongly

Vernieu, Peggy  
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- 3/26.01, 26.03 | opposed to nuclear weapon development of any sort. It is a violation in spirit, if not the letter of the law, of international non-proliferation agreements.

- CONT. | 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.
- 4/37.01

- 5/39.01 | 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

- 6/35.01 | 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Let us not forget that the one bio-terrorist act that has been committed in America was probably done by insiders, not outsiders. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

- 7/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

- 8/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Peggy Vernieu

Vince  
Page 1 of 1

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

From: Vince [mailto:thebbqchef@yahoo.com]

Sent: Monday, April 26, 2004 3:16 PM

To: tom.grim@oak.doe.gov

Subject:

Dear Tom,

I got your email address from trivalleycares.org who has encouraged their audience to write to you in protest of plans to expand certain operations at the Lab.

1/04.01

So, I am writing to you today to express my SUPPORT for you, the lab, and all the research that goes on there. Ironically, the same day I got tvcares's ill-educated flyer dropped on my Livermore doorstep, I saw a segment of "modern marvels" on History channel about NIF and the technological advances that are possible. Projects like NIF, PAVLIS and others are exhilarating. I watched the live coverage of NASA's launch of their SCRAMJET experiment a few weeks back and I cheered like they were scoring a touchdown. The research into energy technologies is equally exciting. I think it would be fantastic to be involved in such projects.

I don't know what goes through the minds of these tvcares people. The same energy solutions that people like them are so anxious for (wind, solar, hydrogen cell) were and are developed by labs like yours. I guess they want to eat their cake and have it too.

Anyway, I just wanted to drop you a line to show my support and let you know that not everyone cares about trivalleycares.

Thanks,  
Vince

**Wahrer, Carol**  
**Page 1 of 4**

**Wahrer, Carol**  
**Page 2 of 4**

Date: May 27, 2004

From: Carol Wahrer  
 544 Nightingale St.  
 Livermore, CA 94551  
 (925) 447-8759  
 cwahrer@comcast.net

To: Mr. Thomas Grim, L-293  
 U.S. Department of Energy,  
 National Nuclear Security Administration  
 Livermore Site Office, SWEIS Document Manager  
 7000 East Avenue  
 Livermore, CA 94550-9234

Fax: (925) 422-1776  
 Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Site-Wide Environmental Impact Statement (SWEIS) for Continued Operations at Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

Through this letter we are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future. We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

1/31.04

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a

2/08.02

reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2/08.02  
 cont.

2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

3/34.01

4/33.01,  
 25.01

3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

5/27.01

4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

6/37.01

5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.

Wahrer, Carol

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7/26.01 8/26.03	<p>6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.</p>
9/26.04	<p>7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990s, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.</p>
10/39.01	<p>8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.</p>
11/35.01	<p>9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.</p>
12/14.01	<p>10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous,</p>

Wahrer, Carol

Page 4 of 4

12/14.01 cont.	<p>radioactive or biological substances that may be occurring in any building that does not comply with federal standards.</p>
13/22.01	<p>11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.</p>
14/20.05	<p>12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.</p>
15/01.01	<p>13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).</p>
16/07.01	<p>Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.</p>
	<p>The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.</p>
	<p>Sincerely,</p>
	<p>Carol Wahrer 544 Nightingale St. Livermore, CA 94551 (925) 447-8759 cwahrer@comcast.net</p>

Weil, Janet  
Page 1 of 1

Weinstein, Bonnie  
Page 1 of 3

Mr. Tom Grim  
Dept. of Energy, NNSA, L-293  
7000 East Avenue  
Livermore, CA 94550

May 16, 2004

Dear Mr. Grim,

My husband and I recently paid a lot of money for a home in eastern Contra Costa County that we hope to enjoy for many years. We were happy to have our bid accepted in a competitive market, but not at all happy to read news of the EIS on Livermore Lab, an unwelcome neighbor.

Specifically, we object to:

- 1/35.01 | • Putting a bio-warfare agent "facility" in a classified area at Livermore Lab;
- 2/27.01 | • Bringing back the Plutonium Atomic Vapor Laser Isotope Separation Project, with a large increase of plutonium on site;
- 3/26.04 | • Manufacturing tritium targets for the NIF megalaser.

The Lab is across the street from a large suburban housing development. It's fairly close to Hwy. 580. It's already a huge safety and health liability for Contra Costa County and the entire Bay Area.

My home dates from 1950, but my politics don't. This isn't the 50's, when so many horrors could be put over on the American public as necessary for our "defense." Thanks in part to the uproar over (non-existent) WMDs in Iraq, the public, and I include myself and my husband, knows a lot more about the already existing WMDs in our nation - and in our beautiful county! And we don't want them here anymore than we wanted them in Iraq.

4/04.01 | NO, NO, NO. What were you DOE people thinking? The residents of the Bay Area do not want "bugs and bombs" in the same facility, nor an upswing in nuclear proliferation and pollution. We are going to fight this every step of the way, and we are going to inform others in our network of friends, neighbors and colleagues of the menace that these latest proposed developments present to our health and safety.

5/02.01 | 6/07.01 | The planet is going to run out of accessible oil fairly soon. Why don't you brainiacs at Livermore Lab start working on that challenge, and leave the Cold War era behind? The 50s were a great time for music and baseball, but a really lousy time for US foreign policy and "defense." Join the rest of us in the 21<sup>st</sup> century, already!

With deep concern,

  
Janet Weil  
1393 Grove Way  
Concord, CA 94518

Bonnie Weinstein  
375 Winfield  
San Francisco, CA 94110

May 27, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

The following are my comments in addition to those below.

1/03.01

With all the brilliant minds working together at Lawrence Livermore National Laboratory, perhaps effort and thought should be given to making war unnecessary, to coming up with a plan to disarm the weapons that exist and to turning our military budget--all of it--into a budget targeted to end human suffering and to supply universal human needs throughout the world.

We need a "Manhattan Project" to bring peace not build a better bomb!

As a resident of the San Francisco Bay Area I demand that you stop contributing to the death of the planet and the contamination of our environment.

More weapons means more of a chance they will be used or deteriorate into toxic danger.

2/07.01

Turn Lawrence Livermore National Laboratory into a think tank for peace!

Bonnie Weinstein, Bay Area United Against War

\*\*\*\*\*PLEASE READ FURTHER\*\*\*\*\*

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

Weinstein, Bonnie  
Page 2 of 3

3/02.01	<p>I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.</p>
	<p>Here are my comments on six dangerous new programs being proposed at Livermore Lab.</p>
4/08.02	<p>1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.</p>
5/27.01, 33.01	<p>2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.</p>
6/26.01, 26.03	<p>3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.</p>
7/37.01	<p>4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of</p>

Weinstein, Bonnie  
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7/37.01 CONT.	<p>150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.</p>
8/39.01	<p>5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.</p>
9/35.01	<p>6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.</p>
10/04.01	<p>I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.</p>
11/07.01	<p>Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.</p>
	<p>Peace and solidarity, Bonnie Weinstein</p>

Wenninger, James and Janet E.  
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Western States Legal Foundation, Andrew Lichterman,  
Program Director  
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James + Janet E. Wenninger  
5783 Florence Terrace  
Oakland, CA 94611  
May 25, 2004

Mr. Tomblin  
Department of National Nuclear Security Administration  
L-293  
7000 E. Avenue  
Livermore CA 94550

Dear Mr. Grim,

1/02.01 | We are writing to you because we are strongly  
opposed to the expansion of the Lawrence Livermore  
Lab for the development of more sophisticated  
nuclear weapons. We don't need more weapons  
of mass destruction, and we hypocritically  
condemn other countries for trying to develop them.

2/07.01 | Our priorities would be much better served by  
putting our funds and energy into creating a  
Department of Peace!

Sincerely,  
James + Janet Wenninger

-----Original Message-----  
From: Andrew Lichterman [mailto:[alichterman@worldnet.att.net](mailto:alichterman@worldnet.att.net)]  
Sent: Friday, May 28, 2004 6:23 PM  
To: Thomas Grim  
Subject: LLNL SWEIS comment

Dear Mr. Grim:

Our comment, submitted yesterday, contained an error. Please accept the corrected version, enclosed as a pdf file as the replacement for the version submitted. A corrected version also will be submitted by fax.

If this is a problem, please let us know.

Andrew Lichterman  
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Western States Legal Foundation  
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COMMENT OF THE WESTERN STATES LEGAL FOUNDATION  
AND THE LAWYERS COMMITTEE FOR NUCLEAR POLICY  
TO THE DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)  
FOR CONTINUED OPERATION OF  
LAWRENCE LIVERMORE NATIONAL LABORATORY

May 26, 2004

Michael Veiluva  
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VIA FACSIMILE AND MAIL  
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Thomas Grim  
Document Manager  
National Nuclear Security Administration  
Livermore Site Office, L-293  
7000 East Avenue  
Livermore CA 94550-9234

Re: **DRAFT LLNL SW/SPEIS COMMENTS**  
DOE/EIS-0348 and DOE/EIS-0236-S3

Thank you for the opportunity to comment on the Draft LLNL Site-Wide Environmental Impact Statement (SWEIS). This comment is submitted on behalf of the Western States Legal Foundation (WSLF), a nonprofit foundation based in Oakland, California, which has been active

in environmental and disarmament issues for over twenty years, Lawyers Committee For Nuclear Policy (LCNP), headquartered in New York City, a nonprofit organization

WSLF has participated in numerous NEPA and CEQA proceedings involving LLNL activities, including the 1987 EIR prepared on behalf of the Regents of the University of California, and the 1992 SWEIS/EIR. The latter document was the product of a settlement of a lawsuit filed by WSLF on behalf of Tri Valley Communities Against a Radioactive Environment challenging the 1987 EIR.

This comment departs from prior comments in that it is not intended to “fyspeck” technical inadequacies in the EIS. Instead, the comment draws upon twenty years of experience in monitoring and reviewing activities at LLNL to address global issues of environmental documentation and review, and the broader conflict between NEPA policies and the ongoing expansion of weapons-related facilities at LLNL.

Background to the Present SWEIS: The Problem of Timing

DOE’s NEPA guidelines require that site-wide documentation be prepared “at least” every five years:

“Sec. 1021.330 Programmatic (including Site-wide) NEPA documents

...  
(d) DOE shall evaluate site wide NEPA documents prepared under Sec.1021.330(c) at least every five years. DOE shall evaluate site-wide EISs by means of a Supplement Analysis, as provided in Sec. 1021.314. Based on the Supplement Analysis, DOE shall determine whether the existing EIS remains adequate or whether to prepare a new site-wide EIS or supplement the existing EIS, as appropriate.

The supplement to the 1982 SWEIS/EIR was in 1997. The authors of the SWEIS provide an inadequate explanation for waiting an addition two years to prepare the current document, or for that matter the general timing of the SWEIS, which, in a departure from past reviews, appears detached from any particular central event or program. The SWEIS summary describes a number of new programs and decisions “in the pipeline” such as the plan to use transuranic materials in NIF, but there does not appear to be any documentation of a unitary, programmatic decision linking the various activities. (Such a programmatic decision, of course, would trigger the requirement of a programmatic EIS).

The two prior site-wide EIR/EIS documents were each tied to renewal of the LLNL management contract between the Regents of the University of California and the Department of Energy. The 1987 site-wide EIR appears to have been a purely in-house document prepared by LLNL staff with little or no input from the DOE. It studiously avoided any mention of ongoing programs and dealt only in general terms with prospective impacts. The resulting state court lawsuit (*Tri-Valley Cares, etc. v. Regents*) culminated in a settlement which committed LLNL to

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31.03

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prepare a new site-wide EIR in 1992 when the management contract was to again come up for renewal.

In 1992, the DOE and the Regents jointly issued the last site-wide LLNL EIS/EIR, during a time of reduced weapons development and somewhat increased civilian research under Secretary Hazel O'Leary. (The present SWEIS notably lacks any comparison between the level of activity described in the 1992 document with present LLNL programs. The comparison would be dramatic.) Despite enormous changes to LLNL's mission including NIF, various iterations of AVLIS, and development of stockpile stewardship programs, only a supplemental review was prepared for LLNL in 1997 to coincide with the last renewal of the UC management contract. Over twelve years have elapsed between the last site-wide EIS and the current SWEIS; as a consequence, numerous activities have escaped cumulative analysis.

Similarly, the last programmatic review of DOE weapons activities is out of date. In 1996, the DOE released a Programmatic Stockpile Stewardship and Management EIS which evaluated impacts associated with the evolving stockpile stewardship program initiated in the early 1990s. WSLF was a participant in the subsequent lawsuit *NRDC v. Pena*, which resulted in a settlement leading to the creation of a nationwide database and oversight fund.

The Federal Register Notice (69 FR 9311) for the LLNL SWEIS discloses no particular driver for the timing of the SWEIS other than a recognition that the 1992 EIS/EIR is obsolete. The SWEIS does not otherwise provide any rationale for existing or future timing of site-wide reviews, which is unfortunate. The absence of a reliable schedule for periodic review will inevitably discourage timely global review of programs before irrevocable commitments of resources are made, as in the case of BSL-3, which was the subject of an environmental assessment. The lack of reasonably current site-wide reviews also unfairly burdens state and local agencies (such as the Department of Toxic Substances Control) which must undertake major reviews (as in the case of LLNL's RCRA Part B permit) without the benefit of programmatic documentation, and lack the resources to perform such reviews themselves.

The final SWEIS should commit to a fixed schedule of revised EIS/EIR reviews, not greater than every five (5) years. These could be timed, as suggested by the 1987 and 1992 EIRs, to coincide with management contract bids or renewals.

The Affected Environment

The SWEIS contemplates significant mission changes that are already underway. Perhaps the most significant of the new programs is the BSL-3 laboratory which is intended to investigate biological weapon agents, including aerosolization of pathogens and biotoxins. Remarkably, LLNL limited environmental review of this facility to an Environmental Assessment (EA).

Additionally, the increase in the permitted Pu limit at LLNL is to be  $1.5 \times 10^3$  kg.

The implications of both actions are more pronounced in an urban environment than in a

4/15.02  
 cont.

relatively undeveloped setting such as LANL. The evident risk of handling biotoxins and large quantities of plutonium in such a setting require, at a minimum, a modicum of discussion about the interaction between such activities and existing land uses. The SWEIS merely engages in an overall survey of surrounding land uses (similar to a standard real estate appraisal) but makes little effort to evaluate population densities and potential future growth pattern. Unlike the laboratory itself, the surrounding population and land uses are expected to remain fairly static. These assumptions are contrary to historical growth patterns as described in general and regional plans (see, e.g. Alameda County and San Joaquin County General Plans).

5/08.01

Nearly all new projects that would propose such extraordinary land uses in close proximity to populated areas would, at a minimum, describe alternatives involving different siting scenarios. Without any effort to explain why these activities *must* be conducted at LLNL, the SWEIS fails to propose a single alternative site for the BSL-3 or the expanded plutonium activities described in the SWEIS.

6/35.01,  
 02.02

Both alternative sites and comparisons to alternative programs could be carried out in a programmatic impact statement, which should have preceded the SWEIS. The need for a programmatic impact statement, particularly with regard to the Chemical and Biological National Security Program, is described in our comment to the BSL-3 EA submitted in 2003, and incorporated herein by reference.

The Problem of Incomplete Knowledge vs. History

7/23.01

The CEQA NEPA regulations list elements to be taken into account in determining whether an EIS is to be prepared. These include: (a) the degree to which the proposed action affects public health or safety; (b) the degree to which the effects on the quality of the human environment are likely to be highly controversial; and (c) the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. See 40 CFR §1508.27.

8/25.05

Once an EIS is prepared, these considerations do not fly out the window. Lengthy exposure tables which give the appearance of scientific certainty are an improper substitute for a more extensive analysis of the *range* of risks and impacts from given activities. The SWEIS fails to acknowledge the tremendous uncertainties associated with any of the exposure risks estimated to occur from routine activities or non-routine accidents, especially if such materials enter densely populated communities.

9/23.05,  
 23.01

The EIS provides an inadequate history of past excursions of hazardous materials, which lends a veneer of certainty to the EIS' assumption of 100% mitigation and minimal exposure patterns. Two major tritium events are known: approximately 350,000 curies were released in 1965 and another 300,000 curies were released in 1970. These have been the subject of studies by the Agency for Toxic Substances and Disease Registry (ATSDR), which yielded inconclusive results. (Russ & Goble, "A Critical Review of ATSDR Public Health Assessment For Lawrence

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Program Director  
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9/23.05,  
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cont.

Livermore National Laboratory”, March 28, 2003). The Health Consultation released by ATSDR in September 1993 was forced to rely upon mostly anecdotal data as well as conflicting studies of LLNL workers principally involving melanoma studies. Additionally, public health concerns still exist regarding the documented release of plutonium several decades ago into municipal waste sludge, which found transport into the local community by way of distribution of processed sludge as a garden soil amendment.

The SWEIS inappropriately isolates its analysis of impacts from this history. The validity of assumptions regarding risks and excursion pathways can only be evaluated in the context of past incidents, as well as conventional events involving hazardous wastes or failures in HEPA filtration systems (see, e.g., DNFSB Technical Report, “HEPA Filters Used in the Department of Energy’s Hazardous Facilities,” May 1999).

The Problem of Incremental Analysis: Alternatives

As with past attempts to evaluate the impacts of Laboratory operations (University of California Regents, 1987, DOE, 1992), comparison of impacts from different “alternatives” is frustrated by the fact that unlike a new project or development, the SWEIS addresses a fifty-year old facility. The SWEIS “baseline” is premised upon the Laboratory’s robust operations in 2002, so that the three alternatives - “reduced operations”, “no action”, and the “preferred alternative” are incremental variations of one another, since the vast majority of programs and facilities at LLNL were constructed long ago and are in full operation, and LLNL has accumulated a significant volume of “legacy” waste. This fact underscores the ever-expanding quality and quantity of land uses such as hazardous and radioactive waste storage, expansion of materials limits, and construction of biological agent laboratories, which are patently inconsistent with the immediate land uses in nearly every direction from LLNL. The SWEIS also contemplates considerably heightened transport of TRU, LLW and mixed waste, which has been the subject of considerable impact and safety studies, but receive little attention here. As with the Stockpile Stewardship and biological weapons programs, the need for a programmatic EIS to address national programs to transport waste and LLNL’s role is considerable.

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The absence of any programmatic “decision” or “action” results in two profound conundrums for the authors of the SWEIS. First, the document inevitably violates the NEPA rule against pre-determination, that is, precluding the irrevocable commitment of resources to a proposed action before environmental review is complete. The EIS is based upon a number of “micro-reviews” of facilities which are, for the most part, being expanded or modified. The lack of detail in the multiple programs described in the SWEIS, and a decision-milestone guide as to each, will enable a number of these programs to “slip through” the NEPA schedule. The majority of planned activities are, in one form or another, continuations of existing programs that have been built or funded.

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The second problem presented to the SWEIS authors is the difficulty of comparing “alternatives” in any meaningful quantitative way. The problem is best illustrated by figure S-1 at

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page S-9 of the Summary, which purports to provide a “qualitative comparison” of the three alternatives. The graphs, which are devoid of numeric values, give the impression of significant differences in the alternatives, to the extent of 50% between the preferred alternative and the alternative of reduced operation. The problem, of course, is there is no y-scale given to the bar graph, so that we do not know the measure of comparison. If the actual comparative charts are consulted (generally, Table S.6-1), the differences are typically 10% or less in impacts such as housing. In other areas, such as production of TRU and LLW, the differences are greater. But unless the public has the patience to contrast and compare the multiple tables in S.6-1, the quantitatively-devoid graph of S.5-1 reflects differences in operations with no basis of measurement.

Consequently, the SWEIS suffers from a constricted approach to the discussion of alternatives at both poles. Rather than use a conventional “baseline” that would involve ordinary land uses rather than the hazardous activities already ongoing, the public and decision makers begin their review at the 9<sup>th</sup> floor of a ten-story building. Drawing from the NRC’s requirement to its licensees to consider and propose decommissioning plans with license applications, the SWEIS should address the eventual “decommissioning” or brownfield status of LLNL after most if not all operations have ended. This is especially appropriate in the light of U.S. treaty obligations and related commitments which require the United States to negotiate in good faith for the elimination of its nuclear arsenal (see discussion regarding the Nuclear Nonproliferation Treaty below).

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At the other pole, the SWEIS must include a fair and frank discussion of ever greater expansion that would incorporate analysis of the impacts of possible future decisions to develop significant nuclear weapons component production capacity “in-house” at LLNL and LANL, and of expanding efforts to modify nuclear weapons and their delivery systems to facilitate potential DOD requirements for nuclear weapons with new capabilities. The failure of the SWEIS to expand its vision beyond the immediate future is directly related to the absence of any consideration being given to updating the 1996 Stockpile Stewardship Programmatic Impact Statement, despite massive mission changes as evidenced by the 2002 Nuclear Posture Review. The Stockpile Stewardship PEIS, like the 1992 Livermore SWEIS/EIR, is hopelessly outdated and cannot be given legal significance as a tiering document to contemporary impact studies.

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The narrow scope of the alternatives discussions, particularly on the subject of future growth, derives from the general tendency of the DOE to commit resources in advance of environmental review. The growth witnessed between just the 2002 baseline from prior measures suggests that in all likelihood, the SWEIS is underestimating the growth-inducing and cumulative impacts from LLNL operations over the next ten years, a useful measure given the twelve-year gap between this SWEIS and the prior 1992 SWEIS/EIR.

The Broader View

As referenced above, the decision by the agency to only address these facilities and programs in a site-specific EIS impairs the ability of the public and decision makers to understand

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and appreciate the nationwide effects and programmatic linkages inherent in these activities. For example, there is no discussion of the potential impacts to communities along transportation routes for hazardous and radioactive wastes. The SWEIS consistently restricts its impact analysis to "the waters edge", namely LLNL's boundary and perhaps the immediate community.

This deficiency is more serious given the integral role of LLNL in the retooling and accelerated development of the nuclear weapons complex following the Nuclear Posture Review. While the SWEIS is far from explicit, it appears, as noted above, that LLNL may have an expanded role in the production of nuclear weapons components and/or component prototypes, and that nuclear weapons design activities are likely to intensify as well. No effort is made to provide a clear picture of these activities over the period in which it is likely that this SWEIS will be used as a tiering document. The result is segmentation of environmental analysis as serious as that associated with the division of environmental review of any major public work into its disparate components, which have the invariable effect of understating impacts.

In the setting of this SWEIS, the *accuracy* of the environmental analysis is vitiated by the failure to consider corresponding actions or facilities at other sites which depend or relate to LLNL programs. For example, the "no action" or "reduction in activities" alternatives may not necessarily have lesser impacts on a programmatic scale, if the activities are simply being shifted elsewhere. The most obvious example of the transference of impacts is where, as contemplated by the SWEIS, waste is being transported for storage elsewhere. The transport shifts the inherent risks posed by the material to communities along transportation routes and the disposal site. The SWEIS addresses little of this, and cannot rely upon programmatic documents prepared nearly a decade before, specifically those prepared in connection with the Stockpile Stewardship and Waste Management reviews.

There are important domestic and international policy issues implicated by the broad mission changes described in the SWEIS. The public and decision makers have the right to be made aware of and understand these implications, particularly as they relate to the Nuclear Non-Proliferation Treaty, the Biological Weapons Convention, the Statute of the International Criminal Court, international humanitarian law, the advisory opinion of the International Court of Justice on nuclear weapons, and other international instruments and laws affecting nuclear and biological weapons. Significant new activities in both areas also should also be the subject of substantial non-proliferation reviews.

The Nuclear Nonproliferation Treaty

The SWEIS purports to compare No Action, Proposed Action, and Reduced Operations Alternatives. However, the three cases have minimal effect on the facilities and operation proposed by NNSA, so that there is no true alternatives analysis. To comply with NEPA, DOE/NNSA must examine a true alternative based on a zero case, in conformity with the requirements of the Nuclear Non-Proliferation Treaty (NPT).

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Under Purpose and Need, the Draft SWEIS gives considerable weight to the 2001 Department of Defense Nuclear Posture Review (NPR), which purports to lay out the direction for U.S. nuclear forces over the next 5 to 10 years. The centerpiece of the NPR is a new strategic triad, "with flexible response capabilities." The authors of the SWEIS give particular deference to the third leg of this new triad, "a revitalized defense infrastructure," which they say, "reflects a broad recognition of the importance of a robust and responsive nuclear weapons infrastructure in sustaining deterrence."

The NPR, a DOD planning document, conflicts in its essence with the NPT, a treaty second only to the United Nations Charter in the number of states parties. The NPT was signed by the United States in 1968. It was ratified and entered into force in 1970, thus becoming part of "the supreme law of the land" under the U.S. Constitution. As U.S. law, the NPT supersedes a DOD planning document. Article VI of the NPT obligates the United States to "pursue negotiations on good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and to a treaty on general and complete disarmament under strict and effective international control." The 1995 extension decision was coupled with a package containing Principles and Objectives for Non-Proliferation and Disarmament, including the completion of negotiations on a Comprehensive Nuclear-Test-Ban-Treaty no later than 1996, immediate commencement and early conclusion of negotiations on a convention banning the production of fissile materials for nuclear weapons, and "[t]he determined pursuit by the nuclear-weapon-states of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons....", and a strengthened review process. In 1996, the International Court of Justice, the judicial branch of the United Nations and the highest and most authoritative court in the world on questions of international law issued an authoritative interpretation of Article VI. Interpreting Article VI, the Court unanimously held: "There exists an obligation to pursue and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control."

At the close of the 2000 NPT Review Conference, the United States and the other nuclear weapon states committed to an "unequivocal undertaking... to accomplish the total elimination of their nuclear arsenals." For the first time in the NPT's 30-year history they dropped qualifiers like "ultimate goal" regarding their nuclear disarmament obligation. They also agreed to "a diminishing role for nuclear weapons in security policies to minimize the risk that these weapons will ever be used and to facilitate the process of their total elimination." In addition, the U.S. committed to "concrete agreed measures to reduce the operational status of nuclear weapons," meaning it promised to work with Russia to take nuclear forces off hair-trigger alert. And the U.S. agreed that a no-backtracking "principle of irreversibility" applies to nuclear disarmament, nuclear and other related arms control and reduction measures." The 2001 DOD planning document is inconsistent with the United States' nuclear disarmament obligations and commitments under the NPT. Elevating the research and development infrastructure to one leg of a new strategic triad, "that will provide capabilities in a timely manner to meet emerging threats," brings this contradiction into sharp focus.

The zero option remains official U.S. policy and law. As we have consistently maintained,

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a zero option is based upon U.S. fulfillment of its obligation under Article VI of the NPT to negotiate the reduction and elimination of its nuclear weapons. That option is well within the universe of reasonable alternatives the SWEIS should examine to inform decisionmaking by DOE/NNSA itself, other agencies, the President, Congress, and the public. Further, it will broaden and enrich the comparative examination of environmental and proliferation impacts. The differing impacts of possible futures are themselves one relevant factor affecting LLLL, yet if NNSA does not study a zero option the range of comparison will be narrow. There is no broader PEIS or other examination of a zero option completed or planned to which the SWEIS can simply refer.

The Accident Analysis Is Incomplete

Other commenters have addressed the technical deficiencies in the SWEIS' estimates of health impacts from various hypothetical accidents (Comment of Peter Strauss, April 27, 2004). Despite recent events and security concerns expressed regarding LLNL, the focus of these bounding accidents appear to be random, human error incidents and not intentional acts. It is unclear whether provisions for intentional act events are excluded because they do not qualify as "accidents" or for reasons of national security.

The SWEIS's analysis carries forward the same approach performed by the Department of Energy over the last twenty years, in that the end result is limited to various calculations of risk-based exposures to radionuclides, and estimates of latent cancer fatalities. The risk figures associated with each accident are nearly always sufficiently low as to be virtually indistinguishable from routine exposures and common workplace risks, if not lower, given the uncertainties attendant to very low levels of exposure to radioactive material. As with every impact report and study performed at LLNL, the authors of the SWEIS cannot conceive of bounding accident that will pose a measurable risk to workers outside the immediate buildings or to the neighboring community.

The approach taken in the SWEIS violates NEPA's broad mandate of an "interdisciplinary approach", and in particular the requirement to consider economic and social impacts (40 CFR §1508.8(b)) as well as effects on urban quality (40 CFR §1502.16(g)). The consideration of human health impacts from any given accident is indeed a necessary and important component of any accident analysis, but it is by no means complete. The SWEIS authors do not even identify the existence of socio-economic impacts from accidents; they appear to assume that none would exist.

The SWEIS thus gives the inevitable impression that the sole impact from a measurable release of highly radioactive materials into the human environment would solely consist of a negligible elevation of LCFs incapable of ever being traced or measured.

Yet we know that even accidents or non-routine emissions that produce no immediate, easily measurable fatalities (Three Mile Island being the best-known example) produce substantial socio-economic disruptions in neighboring communities. These disruptions begin with the appearance of civilian first-response teams who will face uncertainties of exposure risk unless they are armed in advance with the comforting statistics in Appendix D of the SWEIS. The SWEIS authors assume that such teams and the public will be in possession of perfect knowledge, will agree with DOE's often controversial risk assessments, will dissociate themselves from commonly-held perceptions regarding radioactive materials, and will not adversely react to the objective conditions of a non-routine event. The public's reaction to a publicized incident is unlikely to track the actual exposure values on a precisely arithmetic basis.

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15/25.06  
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These flaws render the SWEIS accident analysis woefully incomplete as well as misleading. There exists a dense body of studies and evaluation of public risk perception associated with hazardous and radioactive materials which has been measured and known. The social and economic impacts of the public's perception of such risks is immense, as demonstrated by the fact that no applications for licensing of civilian nuclear plants have been submitted to the NRC in the last twenty years. Billions of dollars have likewise been spent evaluating and managing privately-held "brownfields" in which low levels of residual contamination preclude economic development. These economic considerations are driven not by simple mathematical computations of LCFs, but also the effect that even minute quantities of hazardous materials have to public perceptions in the marketplace.

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The host of socio-economic impacts associated with a bounding accident involving quantities of radioactive materials include both immediate and long term effects, beginning with traffic and consumption of emergency services engaged in the initial response. Longer term impacts may include loss of use of properties during remediation, possible social dislocation, impacts to local agriculture, and costs associated with long term monitoring. Notably, there is no discussion of the impact on Alameda or San Joaquin County health and environmental departments in the follow-up to a significant release, or even that they were materially consulted during the preparation of Appendix D. As elsewhere, the SWEIS authors engage in the global assumption that local agencies will play their respective roles without complaint or difficulty.

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Extension of the Comment Period

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Given the bulk of the documentation and complexity of issues associated with the SWEIS, WSLF respectfully requests that the comment period to the draft EIS be extended for an additional ninety (90) days.

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<p><u>Comments for Public Hearing on Draft Site-Wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement of February, 2004</u></p>
<p>Later this week, I will be at the United Nations in New York as part of a non-governmental contingent to the Nuclear Nonproliferation Treaty (NPT) Preparatory Committee (Prepcom), which precedes the 2005 five-year review. The NPT is an international treaty and is therefore part of U.S. law, as mandated by our Constitution.</p>
<p>1/01.01   One of the NPT's main principles is that it be a step toward the achievement of general and complete disarmament and, more particularly, nuclear disarmament. Indeed, Article VI of the treaty requires each of its state parties to "pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament."</p>
<p>2/04.01   Rather than comply with our responsibilities under the law, the National Nuclear Security Administration's (NNSA's) proposed activities at LLNL, according to this EIS, break both the spirit and the letter of the law. How can we expect other countries to eschew their own development of nuclear weapons when our actions show that we disregard the law? Indeed, the recent emergence of new nuclear weapons states proves this point. How can the lab more than double its plutonium limit from 1,540 to 3,300 pounds, manufacture prototype plutonium bomb cores on site, manufacture radioactive tritium targets for the NIF, increasing the Lab's tritium at-risk limit nearly ten-fold, and undertake activities to speed a return to full-scale nuclear testing, all the while adhering to our obligations under the law?</p>
<p>LLNL's proposed activities include the above, as well as the reviving of plutonium atomic vapor laser isotope separation (UAVLIS), a nuclear proliferation nightmare. It wants to produce plutonium pits in order to create new bombs in its Modern Pit facility. It seeks to add plutonium, highly enriched uranium and lithium hydride to experiments at the NIF megalaser. This is in order to increase its usefulness for nuclear weapons development.</p>
<p>3/01.01   LLNL wants to develop diagnostics to enhance U.S. readiness to conduct full-scale nuclear tests, leading to unrestrained nuclear testing. And yet, a reading of the LLNL SW/SPEIS would have you believe differently. The summary's purpose and need states that, "The continued operation of LLNL is critical to NNSA's Stockpile Stewardship Program and to preventing the spread and use of nuclear weapons worldwide" and that "the emphasis of the U.S. nuclear weapons program has shifted from developing and producing new weapon designs to dismantling obsolete weapons and maintaining a smaller weapons stockpile." (Draft LLNL SW/SEIS Summary, page S-2) This is patently untrue. What is not stated is that the development of smaller, but more powerful weapons, such as mini-nukes is envisioned. Putting these weapons out there only adds to proliferation. Other countries will not stand idly by as we act counter to international law. As we develop new nuclear weapons, so will they. Nations previously</p>

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<p>3/01.01          cont.</p>	<p>free of nuclear weapons will want to join the club. The Department of Energy (DOE) and NNSA wish to maintain a "robust and responsive nuclear weapons infrastructure in sustaining deterrence," (ibid.) to implement the third element of the new triad under the Nuclear Posture Review. How one accomplishes deterrence in an age of terrorism is difficult to fathom. And yet, LLNL sees itself as "countering the proliferation and use of weapons of mass destruction." (ibid, p. S-3)</p>
<p>4/08.02</p>	<p>We are told that there are three possible alternatives for LLNL: No Action, the Proposed Action and Reduced Operation. At worst, with the proposed action, we can look forward to an increase of 50% over the no action alternative, a more than double increase in the administrative limit for fuel-grade-equivalent plutonium to 1,500 kilograms from the existing 700 kilograms, a three-fold increase of from 20 to 60 kilograms of fuel-grade equivalent plutonium in each of two rooms of the Plutonium Facility to support campaigns for advanced radiography, pit manufacturing, and certification programs. The Building 331 Tritium Facility's tritium administrative limit will be increased from 30 to 35 grams and the material at-risk from a single workstation from 3.5 to 30 grams, an increase of almost ten times. Why is this needed? We are told that this is so they can resume testing. I recall that when the NIF was being considered, it was touted as eliminating the need for testing. How does this enhance our compliance with the NPT? The Proposed Action would double the Building 239 Highly Enriched Uranium (HEU) administrative limit from 25 to 50 kilograms to support Stockpile Stewardship Program activities.</p> <p>If we look at the Reduced Operation Alternative, we are told that it would still maintain full operation readiness for NNSA facilities and operations, but does not represent the level of operation required to fulfill the Stockpile Stewardship Program mission assigned to LLNL for the foreseeable future. However, operations to maintain safety and security would still be in force. LLNL capabilities and infrastructure would still be maintained. Some programs such as the Advanced Materials Program demonstration activities and the laser separation of isotopes of surrogate material or plutonium would not take place. Other reductions would be in NIF operations, engineering demonstration units, pit surveillance efforts, the number of subcritical assemblies, and the terascale simulation facility. These reductions will all reduce environmental impacts, such as transuranic waste generation and worker dose.</p> <p>Increased site activities under the No Action Alternative or Proposed Action could increase the likelihood of soil contamination due to increased levels of activity and corresponding increases in the potential for accidental releases. Under the Reduced Operation Alternative, a lower likelihood of soil contamination would be expected. Unfortunately, we are not given the choice of Reduced Operations Leading to Dismantling of the Nuclear Weapons Facility. That would be my choice. It would also be most in line with our obligations under the NPT.</p>
<p>5/01.01</p>	<p>Whether by government hand or by terrorist instrumentality, we live in a world that is increasingly less secure. We must stop these activities that lead us down the path</p>

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5/01.01 cont. of lawlessness to nuclear proliferation and annihilation. We must honor our obligations under the law and work to achieve true security for us all.

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April 27, 2004

May 20, 2004

Mr. Thomas Grim, L-293  
U.S. Department of Energy,  
National Nuclear Security Administration  
Livermore Site Office, SWEIS Document Manager  
7000 East Avenue  
Livermore, CA 94550-9234

Fax: (925) 422-1776  
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RE: Comments on the Department of Energy's  
Site-Wide Environmental Impact  
Statement (SWEIS) for Continued Operations at  
Lawrence Livermore National  
Laboratory (LLNL).

Dear Mr. Grim:

Through this letter we are expressing our deep concern with the health and environmental risks posed by the expanded nuclear weapons mission for the Lawrence Livermore National Laboratory (LLNL) into the indefinite future.

We appreciate your focused attention to this matter. Below, we have outlined a number of specific concerns that, taken cumulatively, lead us to the conclusion that the Site Wide Environmental Impact Statement (SWEIS) for the continuing operation of LLNL is so deficient in information and analysis that it must be fixed and re-circulated in draft form. This would allow the community, the regulators, and the legislators to have the opportunity to evaluate the new information that is requested in these comments. Our specific concerns are:

1/31.04

1. The same day of the public hearings for the SWEIS, April 27, 2004, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations for the Committee on Government Reform held a hearing on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage

2/08.02

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at LLNL. On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the deficiencies in the security of nuclear materials at LLNL and other DOE sites. The Energy Secretary made a commitment to consider removing the special nuclear materials at LLNL by 2005. This recent acknowledgement by the DOE that security at LLNL is questionable makes it imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. These acknowledgements make this not only a reasonable option, but one that should be evaluated because it is a foreseeable outcome within the next decade at LLNL.

2/08.02 cont. 2. Instead of reducing the amount of special nuclear materials on-site at LLNL, this plan proposes to more than double the limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. Additionally, under the Proposed Action, the administrative limit for highly enriched uranium in Building 239 would increase from 55 pounds to 110 pounds. Seven million people live in surrounding areas, and residences are built right up to the fence. Plutonium is difficult to store safely because, in certain forms, it can spontaneously ignite and burn. Moreover, it poses a criticality risk when significant quantities are stored in close proximity. The amount of plutonium proposed for LLNL is sufficient to make more than 300 nuclear bombs. Because of the health risks, the proliferation dangers, storage hazards, and very serious security concerns, we believe it is irresponsible to store plutonium, highly enriched uranium and tritium at LLNL. We are calling upon the DOE to de-inventory the plutonium, highly enriched uranium and tritium stocks at LLNL rather than to increase them.

3/34.01 3. The SWEIS proposes to increase the at-risk limits for tritium ten fold, from just over 3 grams to 30 grams. The SWEIS proposes to increase the at-risk limit for plutonium from 44

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3/34.01 pounds to 132 pounds. We believe it is unsafe to increase the amount of tritium and plutonium that can be "in process" in one room at one time. LLNL has a history of criticality violations with plutonium and releases of both tritium and plutonium, making it evident that these amounts should be decreased, rather than increased.

4/33.01, 25.01 cont. 4. This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project was called Plutonium - Atomic Vapor Laser Isotope Separation (AVLIS). Now it is called the "Integrated Technology Project"(ITP) and the "Advanced Materials Program"(AMP). This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the vapor to separate out plutonium isotopes. The ITP / AMP is a health risk and a nuclear proliferation nightmare. We believe the ITP and AMP work should be cancelled as the Plutonium AVLIS was cancelled in 1990 - this time permanently.

5/27.01 5. This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb factory, called the Modern Pit Facility (MPF). Public and Congressional opposition to the MPF has caused its delay this year. The Livermore Lab plutonium pit program goes full-speed ahead in the wrong direction. It will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 cores per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. We call upon the DOE to halt all work on plutonium pit production technologies at Livermore Lab. We

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6/37.01 cont.	believe it is premature for the DOE to spend taxpayer dollars on this technology and the prudent and reasonable outcome is to delay or cancel this project.
7/26.01	6. This plan will add plutonium, highly-enriched uranium and large quantities of lithium hydride to experiments in the National Ignition Facility mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development, including for the design of new types of nuclear weapons. It will also make the NIF more hazardous to workers and the environment. This is not only dangerous to people's health and safety, and a proliferation risk, but it is sure to result in an inordinate cost to the taxpayer. No cost estimate associated with this proposal has been released to date. We ask the DOE to cancel these dangerous, polluting, proliferation-provocative and unnecessary new experiments proposed for the NIF.
8/26.03	
9/26.04	7. The SWEIS reveals plans to manufacture tritium targets at LLNL. The tritium-filled targets are the radioactive fuel pellets that the NIF's 192 laser beams will "shoot" in an attempt to create a thermonuclear explosion. Producing the targets will increase the amount of tritium that is used in any one room at Livermore Lab from the current limit of just over 3 grams to 30 grams - nearly 10-fold more. In the mid-1990's, LLNL stated that target fabrication was to occur off-site because of LLNL's proximity to large populations. Livermore Lab has a history of tritium accidents, spills and releases. The NIF will increase the amount of airborne radioactivity emanating from LLNL. We call on DOE to cancel plans to manufacture tritium targets for NIF at Livermore Lab. Further, we urge cancellation of the NIF megalaser. Cancellation of NIF is a reasonable alternative that should be fully analyzed in the SWEIS.

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10/39.01	8. This plan also calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests. This is a dangerous step back to the days of unrestrained nuclear testing. All work at LLNL to reduce the time it takes to conduct a full-scale underground nuclear test should be terminated immediately.
11/35.01	9. This plan mixes bugs and bombs at Livermore. It calls for collocating an advanced bio-warfare agent facility (BSL-3) with nuclear weapons activities in a classified area at Livermore Lab. The plan proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the Bay Area. The draft SWEIS does not adequately describe these programs, or the unique security, health and environmental hazards they present. Construction should be halted on the portable BSL-3 facility. All plans to conduct advanced bio-warfare agent (BSL-3) research on site at LLNL should be terminated.
12/14.01	10. There are 108 buildings identified at LLNL as having potential seismic deficiencies relative to current codes. The SWEIS should include a complete list of these buildings and an accounting of the ones that house or may house hazardous, radiological and biological research materials. LLNL is located within 1 kilometer of two significant earthquake faults, including the Las Positas Fault Zone less than 200 feet from the LLNL boundary. How can we mitigate harm done from an earthquake that damages these buildings before they are brought up to code? We urge the Livermore Lab to stop any work with hazardous, radioactive or biological substances that may be occurring in any building that does not comply with federal standards.

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13/22.01	<p>11. A contractor will be paid to package and ship more than 1,000 drums of transuranic and mixed transuranic waste to the WIPP dump in New Mexico, yet the SWEIS says this is exempt from environmental review. This work in its entirety must be included in the review.</p>
14/20.05	<p>12. The DOE does not acknowledge in the SWEIS that the double-walled shipping containers described in the document may be replaced by less health - protective single-lined containers. We believe that no waste should be shipped in single-walled containers and the SWEIS should provide a guarantee to that effect.</p>
15/01.01	<p>13. The Purpose and Need statement in the SWEIS relies heavily upon the US Nuclear Posture Review, which calls for an aggressive modernization and manufacturing base within the US nuclear weapons complex. This stands in stark contrast to the binding legal mandate to shift "from developing and producing new weapons designs to dismantling obsolete weapons and maintaining a smaller weapons arsenal". We believe a revised Purpose and Need statement should accurately reflect the Livermore Lab's legal responsibility with regard to US law, including US obligations under the nuclear Non-Proliferation Treaty (NPT).</p>
16/07.01	<p>Further, the Purpose and Need statement in the SWEIS almost completely omits LLNL's important role in civilian science research. This omission fatally flaws the alternatives analysis in the SWEIS by neglecting to consider the expanded role that civilian science programs at the LLNL could play in the next decade.</p> <p>The alternatives analysis should be revised to consider LLNL's role in light of the commitments in the NPT and the Livermore Lab's civilian science mission as well as the compelling case for removing special nuclear materials (i.e., plutonium and highly enriched uranium) from the LLNL site.</p>

**White, Danielle**  
**Page 7 of 7**

16/07.01 cont.	<p>Also, after reading Eileen Welsome's The Plutonium Files I was shocked and angered at what these nuclear weapons have and are currently doing to the populus. It is my sincere hope that these evil men will wake up and see that this is supposed to be America not Nazi Germany!!!!!!!</p>
17/23.02	<p>I am curious why we are still subjecting people to these experiments such as Iodine therapy that has not been proven to stop disease. Why are we still allowing these experiments to exist? Why is taxpayers money going to useles projects? Did anyone in your department learn the lessons about the danger of radioactive waste back in the 40's and 50's?? That this uranium does not break down in the environment and killed off most of the scientists working with this toxic waste of cancer and other illnesses?</p> <p>When are you going to realize that by rendering all of these test sites now useles pieces of land you are forcing our already overpopulated world into closer confinement. I would like to find out how radioactive salmon contamating the food cham along with cattle and other animals is helping people? Do you like eating radioactive salmon because I sure don't. And I also don't think it is a matter of national security to conceal this and other information from the public.</p> <p>Sincerely,</p> <p>Danielle White</p>

Wieder, Mark  
Page 1 of 1

Wilson, Beth  
Page 1 of 1

1/04.01

MR. GRIM,

I AM WRITING TO OBJECT TO THE DEPT. OF ENERGY'S RECENTLY RELEASED SWEIS (SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT) FOR LIVERMORE LABS PLANNED OPERATIONS FOR THE NEXT 10 YEARS. I AM OUTRAGED THAT THE SWEIS CALLS FOR DOUBLING THE AMOUNT OF PLUTONIUM ALLOWED FOR LIVERMORE LABS FROM 1540 POUNDS TO 3300 POUNDS. IN ADDITION, THE SWEIS PLAN MAKES LIVERMORE LABS THE PRIMARY TEST SITE FOR NEW TECHNOLOGIES FOR MANUFACTURING PLUTONIUM PITS FOR NUCLEAR WEAPONS. PLEASE OPPOSE THE DOES MISGUIDED & DANGEROUS SWEIS.

MARK WIEDER

1/33.01,  
02.01

5-26-04  
DAVIS, CA

Dear Mr. Grim:

Please do not double  
the plutonium and ramp up  
Nuclear weapons activities  
at Livermore Lab.

Sincerely,

Beth L Wilson

2550 Alvarado Ln SE  
Davis CA 95616

Woodcock, Charlene  
Page 1 of 1

Charlene Woodcock  
2355 Virginia St.  
Berkeley, CA 94709

May 20, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

I write to comment on the DOE's proposal to intensify nuclear weapons development at the Livermore Lab in Northern California. This would be detrimental to the security and best interests of Californians and all Americans.

1/04.01 I oppose the nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator." I oppose the development of "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab. I oppose the storage of more Nuclear Materials. I oppose development of the abandoned Plutonium Atomic Vapor Laser Isotope Separation. I oppose further development of the National Ignition Facility Mega-Laser and call instead for termination of the NIF project. I oppose development of new technologies for producing Plutonium Bomb cores. I oppose readiness to resume full-scale nuclear tests. I oppose locating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. This could weaken the international biological weapons treaty, and it endangers workers, the public, and the environment.

2/01.01 The DOE plan to introduce new weapons programs into LLNL will promote a new arms race, escalate the nuclear danger, and increase the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

3/07.01 DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others.

Statement.

Sincerely,

Charlene Woodcock

Woodcock, Charlene M.  
Page 1 of 1

2355 Virginia Street  
Berkeley, CA 94709  
20 May 2004

Mr. Tom Grim  
Department of Energy  
FAX (925) 422 1776

Dear Mr. Grim:

My public comment: I write to express my opposition the DOE's proposal to intensify nuclear weapons development at the Livermore Lab in Northern California. It is detrimental to the security and best interests of Californians and all Americans.

1/04.01 I oppose the nuclear bunker-buster, the "Robust Nuclear Earth Penetrator."  
I oppose the development of "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.  
I oppose the increased storage of nuclear materials there.  
I oppose development of the Plutonium Atomic Vapor Laser Isotope Separation.  
I oppose further development of the National Ignition Facility Mega-Laser and call instead for termination of the NIF project.  
I oppose development of new technologies for producing plutonium bomb cores  
I oppose preparations to resume full-scale nuclear tests.  
I oppose locating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. This could weaken the international biological weapons treaty, and it endangers workers, the public, and the environment.

2/01.01 The DOE plan to introduce new weapons programs into LLNL will incite a new arms race, escalate the nuclear danger, and increase the environmental threat LLNL poses to the people of California. The SWEIS would move Livermore Lab in exactly the wrong direction.

3/07.01 Instead DOE should work to serve the best interests of the American public by developing and expanding programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and other such areas that need the application of the scientific resources of the Lawrence lab.

Sincerely,

Charlene M. Woodcock

Wysel, Lisa  
Page 1 of 3

Wysel, Lisa  
Page 2 of 3

Lisa Wysel  
1540 Bolero Dr.  
Santa Barbara, CA 93108

May 26, 2004

Mr. Tom Grim  
DOE, NNSA L-293  
7000 East Ave.  
Livermore, CA 94550

Dear Mr. Grim:

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01 I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

Here are my comments on six dangerous new programs being proposed at Livermore Lab.

2/08.02 1. Storage of More Nuclear Materials: This plan will more than double the storage limit for plutonium at Livermore Lab from 1,540 pounds to 3,300 pounds. It would increase the radioactive tritium storage limit from 30 grams to 35 grams. I join California Peace Action and the Livermore-based Tri-Valley CAREs group in calling on DOE to de-inventory the plutonium and tritium stocks at Livermore Lab, not increase them.

3/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this,

3/27.01, 33.01 cont. Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds - a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01, 26.03 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

5/37.01 4. New Technologies for Producing Plutonium Bomb Cores: This plan makes Livermore Lab the place to test new manufacturing technologies for producing plutonium pits for nuclear weapons. A pit is the softball-sized piece of plutonium that sits inside a modern nuclear weapon and triggers its thermonuclear explosion. DOE says these new technologies will then be used in a new bomb core factory, called the Modern Pit Facility (MPF). The Livermore Lab plutonium pit program will enable the MPF and production of 150 - 450 plutonium bomb cores annually, with the ability to run double shifts and produce 900 per year. This production capability would approximate the combined nuclear arsenals of France and China - each year. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for termination of this technology development project.

6/39.01 5. Enhancing Readiness to Resume Full-Scale Nuclear Tests: This plan calls for Livermore Lab to develop diagnostics to "enhance" the nation's readiness to conduct full-scale underground nuclear tests at the Nevada Test Site. This is a dangerous step back to the days of unrestrained nuclear testing and I join with California Peace Action and Tri-Valley CAREs to oppose any move to "enhance" U.S. readiness to conduct full-scale tests.

7/35.01 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed. Tri-Valley CAREs has brought litigation against it.

Wysel, Lisa

Page 3 of 3

7/35.01  
cont. | and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 | I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 | Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Lisa Wysel

**X**

**No Submittals for this letter**

**Young, Kathryn**  
 Page 1 of 2

-----Original Message-----  
 From: Kathryn Young [mailto:bukalo126@sbglobal.net]  
 Sent: Saturday, May 08, 2004 12:24 PM  
 To: tom.grim@oak.doe.gov  
 Subject: no nukes please

Dear Mr. Grim,

As a former school teacher and concerned citizen, I find it difficult to express my fear and outrage about the nuclear plans.

Please consider this letter with my comments on the environmental and proliferation risks from proposed nuclear weapons development and new plutonium and tritium programs at the U.S. Department of Energy's (DOE) Lawrence Livermore National Laboratory (LLNL).

1/02.01 I write to you because the DOE has prepared a draft Site Wide Environmental Impact Statement (SWEIS) that proposes to ramp up nuclear weapons activities at the Livermore Lab in Northern California. Livermore Lab is working on the design of a new, high-yield nuclear bunker-buster, called the "Robust Nuclear Earth Penetrator," and I oppose its development. Additionally, I oppose the development of so-called "mini-nukes" and other new nuclear weapons concepts being researched at Livermore Lab.

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3/27.01, 33.01 2. Plutonium Atomic Vapor Laser Isotope Separation (AVLIS): This plan will revive a project that was canceled more than 10 years ago because it was dangerous and unnecessary. The project is Plutonium AVLIS. This is a scheme to heat and vaporize plutonium and then shoot multiple laser beams through the hot vapor to separate out plutonium isotopes. To do this, Livermore Lab plans to increase the amount of plutonium that can be used at one time in any one room from 44 pounds to 132 pounds a 3-fold increase. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for cancellation of this project.

4/26.01, 26.03 3. Dangerous New Experiments in the National Ignition Facility Mega-Laser: This plan will add plutonium, highly-enriched uranium and lithium hydride to experiments in the National

**Young, Kathryn**  
 Page 2 of 2

4/26.01, 26.03 cont. Ignition Facility (NIF) mega-laser when it is completed at Livermore Lab. Using these materials in the NIF will increase its usefulness for nuclear weapons development. It will also make the NIF more hazardous to workers and the environment. I join California Peace Action and the Livermore-based Tri-Valley CAREs in calling for a close out of the NIF project and termination of plans to use plutonium and other new materials in it.

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7/35.01 6. Mixing Bugs and Bombs: This plan mixes bugs and bombs at Livermore Lab. It calls for collocating an advanced bio-warfare agent research facility with nuclear weapons activities in a classified area at Livermore Lab. The DOE proposes genetic modification and aerosolization (spraying) with live anthrax, plague and other deadly pathogens on site at LLNL. This could weaken the international biological weapons treaty -- and it poses a risk to workers, the public and the environment here in the California. Interestingly, this program is listed as part of LLNL's "no action alternative" as though it were an existing program -- even though it is not yet constructed, Tri-Valley CAREs has brought litigation against it, and a federal Judge has issued a "stay" prohibiting the importation of dangerous pathogens into the facility while the lawsuit moves forward. I join Tri-Valley CAREs in opposing the operation of a bio-warfare agent facility at Livermore Lab.

8/04.01 I believe the DOE plan to introduce new weapons programs into LLNL will promote a new arms race and escalate the nuclear danger. Further, the DOE proposal to double LLNL's plutonium storage limit to 3,300 pounds and triple the amount held "at risk" in any one room increases the environmental threat LLNL poses to the people of California. The SWEIS propels Livermore Lab in exactly the wrong direction.

9/07.01 Instead of proposing new weapons projects, DOE should enhance the peaceful, civilian scientific capabilities and mission at Livermore Lab by proposing new, unclassified programs in environmental cleanup, non-polluting and renewable energy, earth sciences, astrophysics, atmospheric physics and others. The alternative of a "green lab" in Livermore should be pursued instead of the dangerous nuclear weapons future proposed by the Site Wide Environmental Impact Statement.

Sincerely,

Kathryn Young  
 1831 Delaware Street  
 Berkeley, CA 94703

**Z**

**No Submittals for this letter**

## CHAPTER 3: COMMENT SUMMARIES AND RESPONSES

This chapter summarizes the comments the U.S. Department of Energy (DOE) received on the *Draft Site-wide Environmental Impact Statement for Continued Operation of Lawrence Livermore National Laboratory and Supplemental Stockpile Stewardship and Management Programmatic Environmental Impact Statement* (LLNL SW/SPEIS) during the public comment period, and provides responses to those comments. Identical or similar comments provided by more than one commentor are grouped together in one comment summary for response. The responses indicate whether any changes were made to the LLNL SW/SPEIS and the rationale behind those decisions. Section 1.3 describes the organization of this Comment Response Document and discusses the tables provided in Chapter 1 to assist readers in tracking their comments to the respective comment summary and response.

### 01 POLICY

**01.01** Many commentors were concerned that the DOE was not in compliance with Article VI of the Nuclear Nonproliferation Treaty (NPT), which obligates the parties “to pursue negotiations in good faith on effective measures relating to cessation of nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.” Commentors requested that a nonproliferation and treaty compliance review be conducted for the activities covered in the LLNL SW/SPEIS, including the National Ignition Facility (NIF) and the Integrated Technology Project (ITP). Some commentors expressed the opinion that the Nuclear Posture Review cannot be used to justify the Proposed Action because its findings are contrary to international law and treaty agreements.

**Response:** *As indicated in Chapter 1 of the LLNL SW/SPEIS, LLNL is responsible for maintaining the safety, security, and reliability of the Nation’s nuclear stockpile as part of the NNSA’s Stockpile Stewardship Program (SSP). LLNL is responsible for surveillance of several weapons systems currently in the stockpile. The nonproliferation and treaty compliance aspects of the SSP were previously evaluated in the Final Programmatic Environmental Impact Statement for Stockpile Stewardship and Management (SSM PEIS) (DOE 1996a). This work remains relevant.*

*Chapter 2 of the SSM PEIS provides a review of relevant treaties, discusses the nonproliferation aspects of the SSP, and states that implementation of the SSP would not lead to proliferation. The SSM PEIS states, “The loss of confidence in the safety or reliability of the weapons in the U.S. stockpile could result in a corresponding loss of credibility of the U.S. nuclear deterrent and could provide an incentive to other nations to develop their own nuclear weapons programs.”*

*With specific respect to Article VI of the NPT, as explained in the SSM PEIS, “Stockpile Stewardship contributes positively to U.S. arms control and nonproliferation policy...by providing the United States with continued confidence in its weapons to allow for further reductions and to meet its NPT obligations.” DOE/National Nuclear Security Administration (NNSA) has concluded that this remains true. In addition, the jointly*

*submitted report to Congress by the Secretary of State, Secretary of Defense, and Secretary of Energy in March 2004, entitled, “An Assessment of the Impact of Repeal of the Prohibition on Low Yield Warhead Development on the Ability of the United States to Achieve Its Nonproliferation Objectives” (Secretary of State 2004) provides additional information regarding U.S. compliance with its commitment under Article VI of the NPT.*

*The SSM PEIS Record of Decision (ROD) (61 FR 68014) indicates that the decisions made in the ROD “...will help enable the NNSA to assess and certify the safety and reliability of the Nation’s nuclear weapons stockpile. The September 2002 DOE Strategic Plan also provides information on stockpile stewardship and nuclear arms control and nonproliferation. As stated in the Strategic Plan, “The Stockpile Stewardship Program is carried out in full consonance with and supportive of START agreements and other nuclear nonproliferation initiatives.”*

*Therefore, the treaty and nonproliferation aspects of the SSP at LLNL have been evaluated in several DOE documents. The activities identified as a part of the Proposed Action in the LLNL SW/SPEIS are consistent with LLNL’s SSP mission. As a result, these activities do not affect the United States’ continued compliance with arms control treaties including the NPT. Information has been added to Chapter 1, Section 1.3.1 of the LLNL SW/SPEIS that further addresses these issues. The issues of treaty compliance and nonproliferation will be considered, as appropriate, by the DOE decisionmakers in the ROD for the continued operation of LLNL.*

*As indicated in Section 1.3.1, the Nuclear Posture Review establishes direction for nuclear forces for the next 5 to 10 years. The purpose and need of the LLNL SW/SPEIS is consistent with, and supportive of, the Nuclear Posture Review. NNSA disagrees with the opinion that the Nuclear Posture Review, which is discussed in Section 1.3.2 of the LLNL SW/SPEIS, is contrary to international law and treaty agreements.*

*NIF is an integral part of the SSP and as such is considered during the review for treaty compliance and nonproliferation aspects of the SSP. Appendix I of the SSM PEIS provided an evaluation of the construction and operation of the NIF. As indicated in Chapter 1 of Appendix I, one of the objectives of the SSP is “Ensurance that the activities needed to maintain the Nation’s nuclear deterrent are consistent with the Nation’s arms control and nonproliferation objectives.” Nonproliferation was evaluated for NIF in a study The National Ignition Facility and the Issue of Nonproliferation (DOE 1995b). The study, prepared by the DOE Office of Nonproliferation and National Security, concluded that (1) the technical proliferation concerns at NIF are manageable and therefore can be made acceptable, and (2) NIF can contribute positively to U.S. arms control and nonproliferation policy goals. NNSA has determined that the use of fissile material, fissionable material, and lithium hydride in NIF experiments as detailed in Appendix M of the LLNL SW/SPEIS does not change these conclusions. This information has been added to Appendix M, Section M.1.1.1 that addresses this issue. NNSA has reconsidered its requirements and determined that there is no reasonably foreseeable need to pursue either the Advanced Material Program (AMP) or the ITP. Therefore, the AMP has been removed from the No Action Alternative, the ITP has been removed from the Proposed*

*Action, and the information in Appendix N has been removed. Therefore, a review of the treaty compliance and nonproliferation aspect of ITP is no longer relevant.*

- 01.02** Commentors questioned if the proposed BioSafety Level-3 (BSL-3) Facility would be in violation of international biological weapons treaties. According to these commentors, placement of a BSL-3 Facility within LLNL will raise suspicions among other nations and could potentially catalyze a new biological arms race, or complicate possible enforcement and verification protocols. Commentors requested that a nonproliferation and treaty compliance review be conducted for the proposed BSL-3 Facility.

**Response:** *The United States is a signatory to the Biological and Toxin Weapons Convention (BWC), which prohibits the development and production of bioweapons. The BWC does not prohibit activities with biological agents which are for prophylactic, protective or other peaceful purposes. The BSL-3 Facility would be consistent with the BWC as its activities will conform with treaty obligations. As noted in Appendix A, Section A.2.3.2, the facility is designed to accommodate work on detection and counter-terrorism technologies, and will provide for environmentally safe and physically secure manipulation and storage of infectious micro-organisms. The BSL-3 Facility will develop DNA signatures to rapidly identify deadly agents, a capability that could be used to protect the public in response to a bio-terrorism incident. The BSL-3 Facility operation does not combine biological research with nuclear weapons activities. Genetic modification activities would be used for studying how to weaken an agent, not to make it more robust.*

- 01.03** Commentors stated that the United States should reduce the current size of the nuclear weapons stockpile. Commentors expressed concern regarding the number of nuclear weapons that LLNL has designed for the “enduring” stockpile.

**Response:** *With respect to reducing the size of the nuclear weapons stockpile, the President, on November 13, 2001, announced his decision to reduce the number of operationally-deployed strategic warheads to 1,700-2,200 by the end of 2012. Such a reduction was codified in the Moscow Treaty and would be a two-thirds reduction from then-current levels. Subsequently, in May 2004, the President took steps to reduce the total size of the United States nuclear weapons stockpile. By 2012, the stockpile will be the smallest its been in decades nearly a factor of four reduction from the levels at the end of the Cold War.*

*The alternatives described in this LLNL SW/SPEIS are consistent with national security policies, including reasonably foreseeable arms reductions. Regarding the future role of LLNL due to stockpile reductions, the three national weapons laboratories (Los Alamos National Laboratory [LANL], Sandia National Laboratory, and LLNL) possess most of the core intellectual and technical competencies of the United States in nuclear weapons. These competencies embrace more than 50 years of weapons knowledge and experience that cannot be found anywhere else in the United States. For the reasonably foreseeable future, a primary mission of LLNL will be to maintain the safety and reliability of the enduring stockpile, irrespective of the specific warhead types that remain in that stockpile.*

## 02 PROGRAMMATIC PURPOSE AND NEED

**02.01** Many commentors indicated that DOE should not conduct nuclear weapons research and development activities at LLNL. Many commentors indicated that the purpose and need statement is inconsistent, too-narrowly defines the range of alternatives, and does not provide evidence of any specific need or clear justification for the Proposed Action. Commentors were opposed to expanding nuclear weapons activities and developing new weapons systems, such as the “Robust Nuclear Earth Penetrator” and “mini-nukes.” Commentors are opposed to nuclear weapons production at LLNL. Commentors stated that the LLNL SW/SPEIS must include a discussion of impacts regarding future nuclear weapons development. Commentors expressed concern that the mission at LLNL represents an escalation from nonnuclear war to nuclear war. Commentor stated that disposition of weapons materials in the former Soviet Union should be addressed in the LLNL SW/SPEIS.

**Response:** *It is the United States policy for DOE to develop and produce the Nation’s nuclear weapons and to ensure the safety and reliability of the nuclear weapons stockpile. With the end of the Cold War, DOE has been developing strategies for appropriate adjustments to DOE missions and activities consistent with current national security policies that reflect post-Cold War policies, including a smaller enduring stockpile. However, even in the post-Cold War period, international dangers remain, and nuclear deterrence will continue to be a cornerstone of U.S. national security policy for the foreseeable future.*

*The SSM PEIS describes the national security policy framework that defines the purpose and need for DOE’s nuclear weapons mission for the foreseeable future. The SSM PEIS also describes the development of proposed actions and reasonable alternatives in response to changes in national security policy, and puts those changes in a broad technical perspective. The ROD states that the SSP focus is moving away from large-scale development and production of new design nuclear weapons with nuclear testing, to one that focuses on the safety and reliability of a smaller, aging stockpile without nuclear testing. However, with this change in focus, national security policies require DOE to maintain the capabilities of the ongoing SSP. The actions selected in that ROD flow logically from the mission’s purpose and need, given the policy constraints placed on the program by the President and Congress. Enhanced experimental capability at LLNL such as the NIF and the Contained Firing Facility, are needed to provide a source of experimental data used to certify the performance of weapons components and also to verify the simulation models used to assess the safety and reliability of the weapons in the stockpile.*

*As indicated in Section 1.3 of the LLNL SW/SPEIS, the continued operation of LLNL is critical to the SSP and to preventing the spread and use of nuclear weapons worldwide. LLNL conducts a wide range of stockpile surveillance activities to assess the safety and reliability of weapons in the stockpile and to better understand the effects of aging on weapons. These surveillance activities include evaluating the pits in the primaries of*

nuclear weapons. LLNL is the design laboratory for four weapons systems in the stockpile: the W87 and W62 intercontinental ballistic missile warheads, the B83 bomb, and the W84 cruise missile. LLNL supports production through research and development; however, LLNL is not a nuclear weapons production facility. The LLNL SW/SPEIS analyzes the environmental impacts associated with operations at LLNL for each of the alternatives, including operations associated with the nuclear weapons Stockpile Stewardship Program.

LLNL and other NNSA organizations are involved in the disposition of weapons materials from other nations, including Russia. This is included as part of the LLNL mission (see Section 2.3.4 of the LLNL SW/SPEIS).

- 02.02** Commentors stated that the purpose and need statement in the LLNL SW/SPEIS does not acknowledge LLNL's Biology and Biotechnology Research Program (BBRP), and whether LLNL is the best suited entity for going forward with the BSL-3 Facility. Commentors asserted that the BBRP and BSL-3 Facility are connected actions; therefore, the LLNL SW/SPEIS must include a review of the entire BBRP. Commentors indicated that the BSL-3 Facility should not be included as part of the No Action Alternative.

**Response:** *With respect to the existing LLNL BBRP, Chapter 2, Section 2.3.7 discusses this program as an existing program at LLNL as analyzed in the LLNL SW/SPEIS. Once operational, the BSL-3 Facility would be used by the BBRP. The BSL-3 Facility would not be a "connected action" to the BBRP. Rather, the BSL-3 Facility would be a new facility that expands and enhances the existing BBRP capabilities at LLNL. Per Council on Environmental Quality (CEQ) guidance (see 40 Code of Federal Regulations [CFR] §1508.25), actions are connected if they: (1) Automatically trigger other actions which may require environmental impact statements; (2) Cannot or will not proceed unless other actions are taken previously or simultaneously; or (3) Are interdependent parts of a larger action and depend on the larger action for their justification. Mere commonality of objectives is insufficient under CEQ to be a connected action. DOE continues to build upon existing research expertise located at its national laboratories to meet mission requirements. However, DOE has not expanded research such that its projects are concerted or systematic or connected in a National Environmental Policy Act (NEPA) sense. The BSL-3 Facility is included in the No Action Alternative because NNSA completed an environmental assessment analyzing the impacts for constructing and operating the BSL-3 Facility at LLNL and subsequently issued a Finding of No Significant Impact (FONSI) on December 16, 2002. See Comment Response 35.01 concerning the status and operation of the BSL-3 Facility.*

### **03 COST AND SCHEDULE**

- 03.01** Many commentors expressed the opinion that spending money on nuclear weapons and LLNL would be a waste of taxpayers' money. Many commentors advocated spending this money on education, health care, environmental cleanup, renewable sources of energy, and other social programs.

**Response:** *Each year, Congress passes legislation defining the level of funding to meet Administration and Congressional policy direction. DOE/NNSA implements United States policy as established by the President and Congress.*

**03.02** Commentors requested that the LLNL SW/SPEIS evaluate the total cost of all changes and modifications under the Proposed Action.

**Response:** *The LLNL SW/SPEIS provides analysis of the potential environmental impacts associated with the reasonable alternatives. Although cost is not a factor analyzed in the LLNL SW/SPEIS, the ROD will discuss costs, as appropriate.*

#### **04 PROPOSED ACTION**

**04.01** Many commentors are opposed to various Proposed Action programs and projects at LLNL for a number of reasons to include:

- Violation of the Nuclear Nonproliferation Treaty
- Promotes a nuclear arms race
- Involves the use or increased use of radioactive and/or toxic materials (e.g., BSL-3) which are a health risk to the public
- Concerns about impacts to the local environment and endangered species
- Leads to development of new weapons designs or resumption of underground nuclear testing
- Redundant with other DOE laboratory activities

Commentors want DOE to scale down or completely eliminate nuclear weapons research and development. Commentors noted recent reports of lax security, heightening their concerns for the security of nuclear and biological materials. Other commentors supported the Proposed Action for LLNL's role in national security, science, and support of businesses in the surrounding communities. Commentors stated that LLNL does not have a meaningful mission.

**Response:** *The Proposed Action evaluates the environmental impacts of ongoing and new initiatives, activities, projects, and facilities' construction projected at LLNL for the foreseeable future (nominally 10 years) supporting weapons and non-weapons research and development. Those environmental impacts are compared with the No Action Alternative and the Reduced Operation Alternative to provide the decisionmaker with the range of reasonable alternatives needed for an informed choice. For specific responses to the comments stated above, see the following responses:*

*Nonproliferation and nuclear arms race issues: 01.01, 01.03, and 02.01*  
*Health risks: 23.01 and 23.02*  
*Scaling down or elimination of weapons work: 06.01, 07.01, and 07.03*  
*Weapons research and development: 02.01*  
*Environment and endangered species concerns: 16.03*  
*Security issues: 30.01 and 30.02*

*BSL-3 Facility issues: 35.01*

*Issues concerning the redundancy of laboratory activities: 08.01*

*General comments in support of, or opposed to, the Proposed Action have been noted and are included in the public record of this review.*

*The Proposed Action does not include the manufacture or production of nuclear weapons at LLNL.*

**04.02** Some commentors questioned the purpose and need for the High Explosives Development Center Project and replacement of the Energetic Materials Processing Center (EMPC). The LLNL SW/SPEIS does not provide justification of why existing facilities and equipment are obsolete. Commentors questioned what explosive material would be present at the EMPC at Site 300. The LLNL SW/SPEIS has not evaluated the synergistic and cumulative effects of these projects on existing activities at Site 300. Commentors questioned how EMPC waste disposal would be managed to prevent groundwater contamination. Commentors questioned what additional construction would be proposed under the No Action Alternative.

**Response:** *Section 3.3.8 has been amended to clarify that the EMPC is required to provide ongoing energetic materials processing capabilities which, when combined with increased computational capabilities, will add greatly to the understanding of weapons physics resulting in increased confidence in certification of the stockpile. Existing facilities that house activities planned for the EMPC are about 40 years old and are outdated. Typical explosives anticipated to be used in EMPC are the same as those currently in use at Site 300 and include HMX, PETN, RDX, TATB, and TNT.*

*With respect to the purpose and need for the High Explosives Development Center (HEDC), Section 3.3.7 of the LLNL SW/SPEIS now includes the following information: “The HEDC will modernize and replace chemistry and materials science facilities built in the 1950’s and 1960’s at Site 300. These facilities must be rehabilitated or replaced to keep pace with the future work envisioned for mission-critical activities of the supporting facilities at Site 300 such as the Contained Firing Facility, the EMPC, and weapons life extension programs.”*

*With respect to the comment regarding preventing groundwater contamination from waste disposal, LLNL conducts waste management operations in accordance with applicable environmental laws and regulations. Adherence to these requirements minimizes the potential to contaminate the environment through implementation of strict administrative and engineered controls. Existing groundwater contamination, discussed in Section 4.17, is being addressed through the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) cleanup program under the oversight of the U.S. Environmental Protection Agency (EPA), Regional Water Quality Control Boards, and the California Department of Toxic Substances Control. See Appendix O and Section 5.6.10 for additional information concerning pollution prevention and groundwater mitigation measures.*

*Chapter 5 analyzes the cumulative “synergistic” impacts of the entire Proposed Action including the EMPC and HEDC at Site 300. Chapter 3, Section 3.2 describes all the projects, including construction activities, that are included in the No Action Alternative. Additional information on all alternatives can be found in Appendix A.*

- 04.03** Commentors stated that the Petawatt Laser Prototype should be delayed until DOE provides more information on funded uses and the state of the previously used laser. Commentors requested that the LLNL SW/SPEIS address radiological impacts associated with the operations of the Petawatt Laser Prototype.

**Response:** *The petawatt laser system used on the Nova laser system was decommissioned in 1999. Key pieces of it are part of a petawatt laser system in the United Kingdom. Petawatt lasers are being assembled around the world because they are viewed as a basic science tool in the areas of astrophysics, laser fusion, and biomedical science. The petawatt laser proposed at LLNL would conduct experiments using energetic x-rays, electrons and protons. Though not presented separately, the radiological impacts associated with the Petawatt Laser Prototype operation are included in Section 5.3.14.2 as part of the analysis of the radiological health impacts associated with the Proposed Action.*

## **05 NO ACTION ALTERNATIVE**

- 05.01** Some commentors questioned why the LLNL SW/SPEIS does not provide a “true” No Action Alternative. Commentors stated that this alternative does not serve as a baseline since it provides for future activities that have not been evaluated for impacts, and which would expand operations at LLNL. Some commentors expressed support for the No Action Alternative. Commentors identified elements of the No Action Alternative for which DOE has issued a Categorical Exclusion or Environmental Assessment (EA)/FONSI, and stated that these activities should be reviewed in the LLNL SW/SPEIS.

**Response:** *As discussed in Comment Responses 01.01 and 02.01, the SSM PEIS, which focuses on evaluating alternatives for maintaining the safety and reliability of the U.S. nuclear weapons stockpile without underground testing, remains valid today and provides a framework for the SSP and the LLNL site-specific proposals for the foreseeable future.*

*As stated in Section 3.2, the No Action Alternative was analyzed to comply with CEQ’s NEPA implementing regulations (40 CFR Parts 1500-1508), providing a baseline against which the impacts of the Proposed Action and Reduced Operation Alternative can be evaluated. The No Action Alternative evaluates ongoing programs and operations, including approved interim actions, facility construction, facility expansion or modification, and facility decontamination & decommissioning (D&D) for which NEPA analysis and documentation already exists. The No Action Alternative accounts for the fact that LLNL has been an operational national laboratory for more than 50 years, with continuing missions expected for the foreseeable future. Such an approach is consistent with the CEQ guidance “where ongoing programs initiated under existing legislation*

*and regulations will continue, even as new plans are developed. In these cases ‘no action’ is ‘no change’ from current management direction or level of management intensity. Therefore, the ‘no action’ alternative may be thought of in terms of continuing with the present course of action until that action is changed (see CEQ Guidance, 40 Most Asked NEPA Questions).”*

*With respect to elements of the No Action Alternative for which DOE has issued a Categorical Exclusion or EA/FONSI, see Comment Response 31.09.*

## **06 REDUCED OPERATION ALTERNATIVE**

**06.01** Some commentors supported selection of the Reduced Operation Alternative, others supported some elements, and still others believed that it should include more reductions in the area of nuclear weapons research and development. Some commentors objected to the inclusion of new and expanded activities in the Reduced Operation Alternative. Commentors would like the Reduced Operation Alternative to involve dismantling the nuclear weapons facility.

**Response:** *The Reduced Operation Alternative represents an approximate 30 percent reduction in SSP activities at LLNL. Specific activities are proposed for reductions to a level that provides only for mission readiness (i.e., can be ramped up to full operation if required). Requests for further reductions, to include elimination of all nuclear weapons related activities, are inconsistent with LLNL’s DOE assigned mission in the SSP and Purpose and Need for Agency Action (see Sections 1.3 and 3.5 of the LLNL SW/SPEIS for a more detailed discussion). No new activities beyond those with existing NEPA approval are included in this alternative. For a more detailed discussion concerning the underlying purpose and need for agency action, see also Comment Response 02.01.*

## **07 ALTERNATIVES CONSIDERED BUT ELIMINATED**

**07.01** Some commentors suggested LLNL be used for peaceful purposes as an alternative, such as an academic or environmental laboratory. LLNL’s expanded role in civilian science programs and potential conversion to a civilian research facility should be discussed in the LLNL SW/SPEIS. Some commentors requested that DOE incorporate alternatives for developing technologies for cleanup activities and renewable energy sources.

**Response:** *The range of reasonable alternatives developed within the LLNL SW/SPEIS responds to the programmatic purpose and need for critical support of NNSA’s SSP including preventing the spread and use of nuclear weapons worldwide. As explained in Section 3.5, alternatives that do not meet this purpose and need are not considered reasonable and, hence, are not analyzed in detail in the LLNL SW/SPEIS (40 CFR §1502.13). Additionally, the alternatives presented address LLNL’s ongoing missions in the areas of civilian sciences, including environmental cleanup, renewable energy programs, and waste management.*

- 07.02** Commentor stated that if the Proposed Action is approved, LLNL could resume full scale testing at the Nevada Test Site (NTS). The LLNL SW/SPEIS needs to address all aspects of LLNL’s impact on the environment. Commentors stated that the land at the NTS rightfully belongs to the Western Shoshone Nation.

**Response:** *As stated in Chapter 1 of the LLNL SW/SPEIS, DOE/NNSA has prepared this document for continued operation of LLNL, responding to the purpose and need to support the nuclear weapons SSP. The purpose of the SSP is to maintain the safety and reliability of the U.S. nuclear weapons stockpile without underground testing at NTS. The missions at LLNL support that purpose. There is no connected action between the LLNL SW/SPEIS and underground nuclear testing at NTS. Operations at NTS are analyzed in separate NEPA documents.*

*The Western Shoshone people maintain that the Ruby Valley Treaty of 1863 gives them rights to 37,000 square miles in Nevada, including the Yucca Mountain region. In 1977, the Indian Claims Commission granted a final award to the Western Shoshone people, who dispute the Commission’s findings and have not accepted the monetary award for the lands in question. In 1985, the Supreme Court ruled that even though money has not been distributed, the United States has met its obligations with the Indian Claims Commission’s final award and, as a consequence, the aboriginal title to the land has been extinguished. The past use of NTS lands by the Western Shoshone is acknowledged by DOE through its extensive consultation program with the Shoshone and other groups affiliated with the region. However, the land is currently owned and used by DOE.*

- 07.03** Commentor suggested that the LLNL SW/SPEIS use a conventional “baseline” that would involve ordinary land uses rather than hazardous activities already ongoing. The LLNL SW/SPEIS should further address the eventual “decommissioning” or brownfield status of the LLNL after most, if not all, operations have ended.

**Response:** *As stated in Section 3.2, the No Action Alternative was analyzed to comply with CEQ’s NEPA implementing regulations (40 CFR Parts 1500-1508), providing a baseline against which the impacts of the Proposed Action and Reduced Operation Alternative can be evaluated against. The No Action Alternative evaluates ongoing programs and operations, including approved interim actions, facility construction, facility expansion or modification, and facility D&D for which NEPA analysis and documentation already exists. The No Action Alternative accounts for the fact that LLNL has been an operational national laboratory for more than 50 years, with continuing missions expected for the foreseeable future. As explained in Section 3.5 of the LLNL SW/SPEIS, the decommissioning and eventual “brownfield” status of the LLNL was considered but eliminated from detailed analysis. Any future proposals related to D&D would be subject to appropriate NEPA review.*

## **08 OTHER ALTERNATIVES**

- 08.01** Several commentors stated that the alternatives presented in the LLNL SW/SPEIS do not reflect a range of reasonable of alternatives for LLNL’s future role in supporting the

missions of DOE. The LLNL SW/SPEIS should evaluate restructuring of weapons design capabilities among the three DOE laboratories as recommended by the “Galvin Commission.” Several commentors suggested the purpose and need, and alternatives be revised to eliminate redundancy and promote consolidation of nuclear weapon activities to other sites such as Pantex and NTS, such that the environmental impacts at LLNL can be reduced. Commentors expressed concern for the redundancy in constructing supercomputing centers at all three DOE laboratories. Commentors stated that programs and activities at other DOE sites related to the Proposed Action or the No Action Alternative should be evaluated as “connected actions.” There should also be an option to move all radioactive and weapons materials to a more secure and seismically safe facility that is located away from population centers and sensitive species habitats. Commentors questioned if LLNL plutonium operations and stockpile maintenance activities could be transferred to another site within the DOE complex. Some commentors recommended that LLNL consider the “curatorship option” under which DOE would rely on surveillance and nonnuclear testing to determine when repairs are necessary to nuclear weapons.

**Response:** *The LLNL SW/SPEIS includes a range of reasonable alternatives that respond to the programmatic purpose and need in support of DOE/NNSA’s stockpile stewardship missions. Any alternative that does not respond to this purpose and need is considered not reasonable. DOE believes that the programmatic purpose and need in the LLNL SW/SPEIS is appropriate as it responds to the national security policy established by the Administration and Congress.*

*As stated in Section 1.3.2 of this LLNL SW/SPEIS, LLNL conducts a wide range of stockpile surveillance activities to assess the condition of LLNL-designed weapons in the stockpile and to better understand the effects of aging on weapons. In some cases surveillance activities on systems designed by other weapons laboratories may be assigned to LLNL. As a result, LLNL must have similar analytical tools to support their mission. The issue of potentially consolidating the nuclear weapons activities of the national laboratories was previously addressed in the SSM PEIS (see Sections 2.4.1 and 3.1.2 of that document). The SSM PEIS conclusion, “that further significant reductions or consolidations of the weapons laboratories would counter efforts to maintain core competencies and to develop new technologies necessary to ensure continued high confidence in the safe and reliable stockpile,” remains valid today. As such, DOE does not consider consolidation of the national laboratories, such as recommended by the Galvin Committee, to be a reasonable alternative. The issue of “curatorship” was also previously addressed in the SSM PEIS (see Volume IV, Comment Response 40.36). The SSM PEIS stated that “curatorship” alone was not a reasonable alternative for maintaining the safety and reliability of the stockpile in the absence of underground nuclear testing, remains valid today. As such, “curatorship” is not considered a reasonable alternative in this LLNL SW/SPEIS.*

*DOE/NNSA prepares programmatic NEPA documents that evaluate environmental impacts of alternatives affecting multiple sites. DOE/NNSA prepares site-wide EISs to assess the environmental impacts of reasonable alternatives for operations at a*

particular site. This LLNL SW/SPEIS assesses site-specific environmental impacts for the stockpile stewardship mission activities at LLNL and is a Supplemental EIS for the SSM PEIS for the use of proposed material on the NIF. This LLNL SW/SPEIS includes, as appropriate, an analysis of all connected actions, cumulative actions, and similar actions. Operations at other DOE/NNSA sites are covered, as appropriate, by site-wide NEPA documents for those sites.

- 08.02** Several commentors suggested that due to deficiencies in the security of nuclear materials at LLNL and other DOE sites, the LLNL SW/SPEIS should evaluate an alternative that would remove all weapons and radioactive materials from LLNL. Many commentors cited congressional reports and testimony, as well as a speech from the Secretary of Energy, concerning nuclear material security deficiencies at LLNL and other DOE sites.

**Response:** *Removal and relocation of nuclear materials to another DOE/NNSA laboratory is not considered a reasonable alternative as it would not respond to the programmatic purpose and need for stockpile stewardship missions at LLNL. Section 3.5 of the LLNL SW/SPEIS explains why this alternative is unreasonable and was eliminated from detailed analysis. The storage and use of this material at LLNL is considered safe and secure. Security concerns are addressed in classified security documents, and facilities provide the required safeguards necessary to securely protect all materials.*

*The alternative of “moving all radioactive and weapons material to a more secure and seismically-safe facility” is discussed in Section 3.5 of the LLNL SW/SPEIS which explains why this alternative is unreasonable and was eliminated from detailed analysis. While DOE/NNSA notes the concerns expressed in congressional reports and testimony, and the Secretary of Energy’s speech, DOE/NNSA maintains that the storage and use of radioactive and weapons material at LLNL is safe and secure. The reduction and consolidation of nuclear material is a complex-wide issue and if a proposal is developed, a separate NEPA analysis would be conducted, as appropriate.*

- 08.03** Commentor suggested an alternative to the Proposed Action be considered that would allow LLNL to meet its basic mission objectives while reducing, or at least, not increasing, potential environmental impacts over the No Action Alternative.

**Response:** *The alternatives analyzed in this LLNL SW/SPEIS are considered reasonable and appropriately respond to the programmatic purpose and need. As described in Section 3.4, the LLNL SW/SPEIS includes the Reduced Operation Alternative, which would maintain full operational readiness for NNSA facilities and operations, but does not represent the level of operations required to fulfill the Stockpile Stewardship Program mission assigned to LLNL for the foreseeable future. Section 5.6 discusses mitigation measures which have the potential to reduce environmental impacts.*

## **09** LAND USE

- 09.01** Commentors expressed the following comments concerning Figure 4.2.1.1–1, Livermore Site Surrounding Land Uses:

- The area north of I-580, east of Vasco Road and west of Laughlin Road is primarily zoned Residential, not Rural Residential.
- The area east of Vasco Road and south of East Avenue is Subarea 1 of the City’s South Livermore Valley Specific Plan. Single-family residential development by Meritage Homes and Pacific Union Homes (133 units total) is currently underway in this area.
- Subarea 2 of the South Livermore Valley Specific Plan is located south of East Avenue and west of Vasco Road. A significant portion of this area is under development with single-family residences by Signature Homes (550 units total) and Greenbriar Homes.

**Response:** *All designations are from the municipal or county general plan and zoning maps. Comments noted and Figure 4.2.1.1–1 has been changed. These changes have been identified by sidebars.*

**09.02** Commentors expressed the following comments concerning Figure 4.2.2.1–1, Livermore Site Surrounding Land Use Designations:

- Livermore recently completed a comprehensive update of the General Plan with the adoption of the 2003 General Plan in February 2004. Land use designations for several properties in the vicinity of LLNL have changed as a result of the updated General Plan.
- The land use designation for 38 acres located east of Vasco Road and north and south of Brisa Street was changed from High Intensity Industrial to Urban High-3 Residential (14–18 units per acre). This site is located adjacent to the Vasco ACE station.
- The Service Commercial area located north of I-580 and east of Herman Avenue is property owned by BART and is planned for future transit oriented development. The area has been redesignated as Urban High-2 Residential (8–14 units per acre), Urban High-3 Residential (14–18 units per acre), and BART.
- The area east of Greenville just south of I-580 is not designated as Large Parcel Agriculture.
- LLNL and Sandia National Laboratory/California (SNL/CA) are now designated as Community Facilities-Research and Development.

**Response:** *The data provided was evaluated and changes were made in Figure 4.2.1.1–1 and Figure 4.2.2.1–1, as appropriate. These changes have been identified by sidebars. The data presented are more than adequate to determine impacts according to NEPA.*

**09.03** Commentor expressed the following comments concerning city of Livermore planning programs:

- The discussion related to the City’s General Plan on p. 4.2-9 and 4.2-10 need to be updated to reflect current policies and programs.
- The North Livermore Area “A” General Plan Amendment adopted by the City in March 1988 (p. 4.2-10) has been incorporated into the updated General Plan and is no longer a separate planning document.

- The update for the Livermore Municipal Airport Master Plan is currently underway. The City Council recently formed an advisory committee to review the proposed draft Master Plan and provide recommendations to the city and county. Completion of the update process, including public review of the draft Master Plan and environmental documents, is tentatively scheduled for the end of 2004.

Commentor stated that the LLNL SW/SPEIS should analyze the appropriateness of continued weapons research, development, and manufacturing activities in close proximity to growing suburban communities, for example the development of the Tracy Hills project within 1 mile of Site 300.

**Response:** *The data presented is adequate to determine the impacts to land use according to NEPA. With regard to the comment on encroachment, the LLNL SW/SPEIS assesses potential direct, indirect, and cumulative impacts to the population surrounding the Livermore Site due to Livermore Site activities.*

## 10 COMMUNITY SERVICES

- 10.01** Commentor stated that civilian first response teams need to know the exposure risks in advance, in the event of an accident. There is no discussion of the impact on Alameda or San Joaquin County health and environmental departments in the follow up to a significant release or that they were consulted in the preparation of Appendix D.

**Response:** *As stated in Appendix I, Section I.2.4.1, the Alameda County Sheriff's Office of Emergency Services is the lead offsite response coordination agency for major emergency and disaster situations at or affecting the Livermore Site. If the emergency situation requires that the general public be warned, the emergency public information is issued by the cognizant local agency, such as the cities of Livermore or Tracy or counties of Alameda or San Joaquin, depending upon the area affected by the incident.*

*As stated in Appendix I, Section I.3.1.7, formal and informal relationships exist between LLNL and external emergency planning and response agencies and organizations. Where possible, interrelationships with Federal, state, and local organizations are prearranged and documented in formal plans, agreements, and understandings for mutual assistance detailing the emergency support to be provided. A list of these agencies and organizations is included in this section. See Comment Response 15.01 for a discussion of offsite impacts associated with accidents.*

## 11 PREHISTORIC AND HISTORIC CULTURAL RESOURCES

- 11.01** Commentor requested that DOE complete a National Register of Historic Places evaluation at Site 300, particularly of subsurface prehistoric cultural resources. Commentor questioned if there is a conflict of interest by using LLNL archeologists as opposed to hiring an independent contractor.

**Response:** *The Programmatic Agreement in Appendix G was developed with the State Historic Preservation Officer (SHPO) and requires completion of an inventory and National Register of Historic Places evaluation for both historic and prehistoric resources no later than February 2005. The Programmatic Agreement also specifies an agreed-upon process until the inventory and assessment is complete.*

*Prior to conducting activities with the potential to affect cultural resources, DOE identifies resources located within the region of influence, evaluates them for eligibility to the National Register of Historic Places, and determines the potential for the activity to affect important resources. DOE then consults with the SHPO regarding the determination of effect, per Section 106 of the National Historic Preservation Act (NHPA). Subsurface prehistoric cultural resources would only be identified through discovery during construction excavation. Should this occur, the excavation activity would be halted in the vicinity of the discovery, DOE would have the resource recorded and evaluated by a professional archaeologist, and the information would be provided to the SHPO in consultation under Section 106. As part of their review, the SHPO would evaluate the work conducted by the archaeologist to determine if it was done properly. In general archeologists are LLNL employees; however, outside archeologists are brought in for a specific project. Reports prepared by LLNL are submitted to DOE for review and approval and transmitted to the SHPO for consultation.*

- 11.02** Commentor stated that the potential impacts on historic resources from D&D activities are inconsistent. The first and second paragraphs in Section 5.3.4.2 and Table 3.6–1 contradict each other.

**Response:** *Tables 3.6–1 and S.6–1 have been revised to correct the inconsistency.*

- 11.03** Commentor stated that the LLNL SW/SPEIS could be in violation of the *National Historic Preservation Act* that requires agencies to obtain prior approval of the expenditure of Federal funds before construction. The Programmatic Agreement in Appendix G states that the NNSA and the University of California will complete their inventory and assessment no later than February 2005. If Federal funds are allocated before these assessments are complete, then DOE will be in violation of 16 *United States Code* (U.S.C.) 470f.

**Response:** *The Programmatic Agreement revises procedures outlined in 36 CFR Part 800. By execution of the Programmatic Agreement and fulfillment of its terms, NNSA has satisfied its responsibilities under Section 106 of the NHPA and its implementing regulations. No funds would be expended on projects or activities for which Section 106 has not been completed. Funds would be allocated to projects where Section 106 compliance has already been completed.*

## **12 AESTHETICS AND SCENIC RESOURCES**

- 12.01** Commentors stated that policies of the Scenic Route Element of the 1976 General Plan have been incorporated in their entirety into the Community Character Element of the

2003 General Plan. Other visual resource policies of the 1976 General Plan, including amenities designated for preservation as indicated in Table 4.6.1–2, have also been carried forward in the 2003 General Plan.

**Response:** *Thank you for the information. The data presented in the Draft LLNL SW/SPEIS is adequate to determine the impacts according to NEPA and the draft City of Livermore General Plan 2003-2005 is included in the references (City of Livermore 2003).*

### 13 METEOROLOGY

No comments were received related to meteorology.

### 14 GEOLOGY

**14.01** Several commentors expressed concern regarding fault lines and potential earthquake risk in the vicinity of LLNL. The alluvial or Franciscan soils underlying LLNL are unstable. In particular, the Greenville and Calaveras faults should be analyzed in detail, as they have caused dangerous earthquakes in the past. The Las Positas fault is less than a mile away from the lab and, as stated in the LLNL SW/SPEIS, its hazards are poorly understood. The San Andreas fault also poses a risk. Information concerning the fault zone less than 200 feet from LLNL property should be included in the Summary. Earthquake scenarios must include the potential for substantial ground cracks as well as shaking. Commentor opposed nuclear materials buildup in a seismically active area, and requested an explanation of all planned activities near fault zones, an analysis of potential harms/damages from an earthquake at the highest reasonably expected level, and any precautions that have been or will be taken to mitigate harm.

Commentors also requested that the LLNL SW/SPEIS include a complete list of buildings and account for the buildings that house hazardous, biological, and radioactive materials. Commentors stated that some buildings at LLNL do not comply with Federal seismic standards, have unacceptable seismic risks, and need to be brought up to code. The LLNL SW/SPEIS needs to provide a list of the buildings' names and locations so that they may be retrofitted to accommodate Proposed Action activities. Commentors suggested that the lab have no increase in plutonium or tritium amounts or storage until all seismic upgrades are completed.

**Response:** *The analysis of geologic hazard presented in the LLNL SW/SPEIS includes the discussion of the Greenville, Calaveras, and Las Positas Faults. The latest analyses for those faults are discussed in the LLNL SW/SPEIS. These analyses not only included LLNL specific studies (LLNL 2002dk), but also analyses for the city of Livermore (City of Livermore and LSA 2002) and those for the entire central California region (USGS 2003). The most recent LLNL analysis addresses the contribution of local faults, including the Greenville and Las Positas faults, and regional faults, including the San Andreas and Calaveras faults. The information in the LLNL SW/SPEIS regarding levels of risk uses the most recent information from these recent analyses. These analyses estimate the probabilities that the faults in the area will produce earthquakes with strong*

to violent ground motion. The U.S. Geological Survey analyses, while more regional in perspective, also analyze the seismic risk for the San Andreas, Calaveras, and Greenville faults. These analyses represent the best knowledge currently available for the seismic risk associated with these faults. While older references are cited, those citations are primarily used for specific language.

The discussion of seismic risk at LLNL in Appendix H of the LLNL SW/SPEIS includes the consideration of the Las Positas Fault as a substantial contributor to the seismic hazard at LLNL because it passes within 1 mile of the Livermore Site. The use of the term “poorly understood” in Appendix H in describing the Las Positas fault occurs where the context is a description of how the fault geometries are used in calculating the risk. Since the fault geometry of the Las Positas Fault is uncertain, each of the potential fault geometries is used in the hazard calculations. This method conservatively estimates the hazard posed by the fault even though the exact fault geometry is not fully understood.

The LLNL SW/SPEIS Summary briefly presents information concerning those impacts that significantly differentiate among the alternatives evaluated in the LLNL SW/SPEIS. The seismic risk associated with the Las Positas Fault is discussed in Chapter 4, Section 4.8 of the LLNL SW/SPEIS as part of the total seismic risk from all local and regional faults. However, the seismic risk does not significantly differ among the alternatives being considered in this LLNL SW/SPEIS. Therefore, the seismic risk was not discussed in the Summary; however, Appendix D includes analysis of a site-wide earthquake, and the seismicity of the region surrounding LLNL is discussed in Appendix H.

Ground cracks resulting from earthquakes are mainly due to two mechanisms. The first is the displacement of ground due to movement along the surface trace of a fault. The second is where the earthquake causes liquefaction in susceptible sediments underlying more solid or competent sediments. The liquefied sediment starts to slosh into waves as shaking from the earthquake continues. The overlying layer of sediment gets broken and cracks in the overlying layers can open and close.

The hazard of surface faulting is not regional in extent as is ground shaking, but instead is restricted to the displaced segment of a relatively narrow linear fault zone. The LLNL SW/SPEIS discusses the potential for surface faulting at the Livermore Site and Site 300 in Section 4.8.3, Geologic Hazards. The potential for surface faulting within the Livermore Site is very low since there are no traces of surface faults on the Livermore Site. Traces of surface faults do occur at Site 300. The only structures located adjacent to the surface faults are Buildings 899A and 899B at the pistol range. No new facilities are proposed near the faults.

The LLNL SW/SPEIS also discusses the potential for damage from liquefaction at both the Livermore Site and Site 300. Based on the fairly deep groundwater levels, the uniformly distributed, poorly sorted sediments beneath the site, and a relatively high degree of sediment compaction, the potential for damage from liquefaction at the Livermore Site is quite low. Based on the presence of bedrock beneath Site 300 and the

*age, composition, and unsaturated condition of the terrace deposits, the potential for liquefaction at Site 300 is low.*

*Appendix A provides a list of buildings that store and use hazardous and radioactive materials. Summary, Section S.5.2.18; Chapter 3, Section 3.3.18; and Appendix A, Section A.2.4.16 include information pertaining to seismic upgrades and their prioritization. Appendix D, Section D.6 includes an impact analysis of an earthquake on LLNL facilities.*

- 14.02** Commentor stated that the *Antiquities Act* of 1906 is not mentioned in reference to construction at Site 300. The LLNL SW/SPEIS should analyze vertebrate fossils, shells, leaves, and stem deposits or state the basis for omitting this reference. The discussion of construction for the NIF at the Livermore Site included the statement that “Should any buried materials be encountered, LLNL would evaluate the materials and proceed with recovery in accordance with the requirements of the *Antiquities Act*.”

**Response:** *Per Appendix M, Section M.5.3.4, the discussion of construction for the NIF at the Livermore Site included the statement that, “Should any buried materials be encountered, LLNL would evaluate the materials and proceed with recovery in accordance with cultural requirements and agreements.”*

*All construction at LLNL, including the Livermore Site and Site 300, is subject to the requirements of the Antiquities Act. The Antiquities Act regulates the protection of objects of historic and scientific interest on lands owned or controlled by the United States Government. The Secretary of the Interior has jurisdiction over the lands at the Livermore Site and Site 300 for these purposes. The LLNL Environmental Safety & Health (ES&H) Manual states that if non-human bones or fossils are found, a permit to excavate may be required through the U.S. Department of the Interior (DOI). The Environmental Evaluation Group within the Operations & Regulatory Affairs Division (ORAD) will coordinate activities that may need to be implemented should paleontological resources be identified. Plant Engineering at LLNL has a soil excavation, grading, and/or drilling permit process in place for all such Site 300 projects that may involve surface disturbance.*

*If bones are found and determined not to be of recent human origin (i.e., paleontological resources), ORAD will notify the University of California Paleontology Museum staff, who will then identify and assess the importance of the discovery. In consultation with the DOI, DOE will then determine whether to either seek a permit from the DOI to excavate the find or preserve the resource in place. Under no circumstances may anyone remove or disturb any artifacts or remains.*

*The LLNL SW/SPEIS, Chapter 5, Section 5.3.6.2, has been revised to read, “Should any buried materials be encountered during construction anywhere at the Livermore Site or Site 300, LLNL would evaluate the materials and proceed with recovery in accordance with the requirements of the Antiquities Act.”*

**14.03** Commentor stated that DOE's reliance on secondary sources to evaluate seismic hazards at Site 300 is below standards set by the 2002 Interagency Committee on Seismic Safety in Construction (ISCCS) report. The Livermore Site Seismic Safety Program should perform an assessment of geological hazards at Site 300, similar to the one performed at the Livermore Site. Seismic upgrades scheduled for Site 300 buildings should be based on primary reconnaissance studies of the buildings and surrounding area. DOE should assess risks of landslides from seismic events at Site 300. Some commentors stated that the life safety standard was used for earthquake analysis, which is the lowest seismic Federal standard, and recommended the use of operational standard to evaluate hazards. In addition, the LLNL SW/SPEIS should disclose whether buildings must be operational during and after an earthquake and whether DOE applied any agency specific criteria pursuant to the ISCCS report.

**Response:** *The assessment of the seismic safety of facilities at LLNL incorporates, as factors, the activities that take place within the facility, the worker population, and the types and amounts of hazardous materials within the facility. It is DOE's policy to design, construct, and operate its facilities so that workers, the general public, and the environment are protected from the impacts of natural phenomena hazards. Safety requirements include: providing a safe work place, maintaining operation of essential facilities, and protecting against exposure to hazardous materials during and after occurrences of natural phenomena events.*

*Within each facility, parts of the facility and equipment are designed to withstand different levels of ground motion. Safety class systems (e.g., those systems necessary for safe shutdown of the facility or maintaining confinement of hazardous materials) are designed the most rigorously. Safety class systems include emergency generators and their fuel tanks, tanks for firewater, sprinkler systems, heating, ventilation, and air conditioning (HVAC) for areas with negative pressure, etc. If a facility becomes non-operational after an earthquake, these safety class systems are designed to remain functional. Other systems are designed to withstand lesser amounts of ground motion.*

*Each building at LLNL was constructed in accordance with the standards that were applicable when it was built. Standards are continuously undergoing change, and while buildings are not rebuilt each time the standards change, seismic retrofits are considered each time buildings undergo a major renovation and when plans are made to significantly change a building's function. The standards usually include safety goals such as minimizing risk to building occupants and maintaining containment of hazardous materials. DOE has designated that LLNL should use the International Council of Building Officials 2000 standard as minimums even though the State of California has not adopted them. Other requirements are more restrictive depending on exact building design and uses.*

*All facilities at LLNL have been evaluated against modern criteria, current and planned use, and building population and inventory. These evaluations allowed for ranking of the facilities by the amount of retrofit that could be required. This evaluation is used as part*

*of the overall planning for LLNL to determine if buildings should be replaced, their use changed, or if they should be upgraded or retrofitted and to what degree.*

*The extent of upgrade is determined by planned use, the ability of the building to be retrofitted to current standards, and the cost versus benefit of the upgrades. Not every building can be retrofitted the same way. For example, it is sufficient for some buildings to undergo simple engineering reinforcement. Other facilities require the addition of shear walls and the sealing of some wall penetrations.*

*Updated information was added in Appendix H, Section H.2 on the seismic upgrades of Buildings 141, 151, 298, 321, and 511. Building 151 was fully retrofitted. Shearwalls were added, windows were blocked off, and extra footings were poured for the shearwalls. Buildings 141, 298, 511, and 321 were retrofitted with reinforcements to the roof connections and other building elements. The lateral resistance of the walls was strengthened if the walls were easily accessible and could be reinforced. Frames were added to some walls. These measures help the building act as a whole unit during the earthquake so that damage is minimized. Some damage will occur in these facilities, (e.g., cracks in the walls, drywall flaking off), but they will not collapse and life safety will be maintained.*

## **15 SOCIOECONOMICS/ENVIRONMENTAL JUSTICE**

- 15.01** Some commentors stated that LLNL is the largest employer in the city of Livermore which in turn helps support the local economy. LLNL also supports small businesses and maintains educational and industrial partnerships.

Commentors suggested that the Bay Area economy could be affected by a nuclear accident at LLNL.

**Response:** *The comments supporting LLNL due to its positive economic benefits are noted. The impacts and risks concerning accidents are discussed and compared in Chapter 3, Section 3.6.11; Chapter 5, Section 5.5; and Appendix D. The accidents analyzed included nuclear, chemical, explosives and biological. The results of the analyses show minimal offsite impacts. Therefore, the effect on the economy would be minimal.*

- 15.02** Some commentors stated that the socioeconomic and environmental justice analysis is incomplete and underestimates the problems associated with the Proposed Action. Population densities, potential future growth patterns, and demographic analysis of surrounding communities should be evaluated in greater detail. The LLNL SW/SPEIS should discuss how property values, population densities, safety perceptions, and health and safety risks impact low-income and minority communities in the vicinity of both sites. A commentor requested that the LLNL SW/SPEIS adequately analyze the economic and social impact of potential releases and accidents at LLNL. The commentor questioned why a low-income and minority community surrounding the lab, which has existing elevated cancer risks, now has additional types of projects that will contribute to

existing contamination. In addition, a commentor stated that waste shipments to Hanford should be evaluated for environmental justice impacts, given the right of Native Americans to live and fish along the Columbia River.

**Response:** *Executive Order 12898 directs the Federal government to identify and address “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Within this Executive Order, it is not enough to establish that minority or low-income populations exist within the region of influence, but that the effects from the action would be disproportionately high and adverse to these populations. The environmental justice analysis in the LLNL SW/SPEIS uses census block groups to identify areas of minority or low-income populations. In general, a block group contains between 600 and 3,000 people and is the smallest tabulation entity readily available from the U.S. Census Bureau. Note that the CEQ guidance, Environmental Justice Guidance Under the National Environmental Policy Act (CEQ 1997) specifies “that Agencies may use demographic data available from the Bureau of the Census to identify the composition of the potentially affected population.” Because individuals who could be classified as minority or low income would be expected within most groups of 600 to 3,000 people, the LLNL SW/SPEIS compares the percentages of minority and low-income individuals within each block group with statewide averages to determine if the block group could be considered a minority or low-income population. Despite the presence of minority and low-income individuals, the populations nearest to the Livermore Site or Site 300 cannot be classified as minority or low-income based on criteria used in the analysis.*

*The impacts and risks concerning accidents are discussed and compared in Chapter 3, Section 3.6.11; Chapter 5, Section 5.5; and Appendix D. The accidents analyzed included nuclear, chemical, explosives, and biological. Details concerning health impacts are discussed in Comment Response 23.02. The results of the analyses show minimal offsite impacts. Therefore, no disproportionately high and adverse human health or environmental effects on minority and low-income populations are expected.*

*Radioactive material shipments, to or from Hanford, were analyzed as part of the ITP under the Proposed Action. ITP has been removed from the Proposed Action and the shipments from Livermore to Hanford are no longer reasonably foreseeable.*

## **16 BIOLOGICAL RESOURCES**

- 16.01** Commentor expressed concern regarding tritium levels in Livermore wine and impact to area wineries should levels increase.

**Response:** *The tritium concentrations in Livermore wines are on average less than 0.2 percent of the EPA’s drinking water standard of 20,000 picocuries per liter (LLNL 20031). The Proposed Action does not include tritium emissions above historical levels as described in Sections 5.2.7.2 and 5.3.7.2. Therefore, the Proposed Action is not expected to have a negative impact on area wineries.*

**16.02** Commentor contended that specific plans in Appendix E would pose serious harm to the California red-legged frog, the California tiger salamander, and/or the Alameda whipsnake, for the reasons outlined below:

- Impact to species from maintenance of Arroyo Las Positas, security buffer, drainage systems, facilities, roads, utilities, storm drainage system, culverts, and landscape
- Increase in vehicle traffic
- Wildlife management (e.g., invasive species, ground squirrel control, herbicides)
- Impacts from construction (e.g., EMPC) and D&D. The LLNL SW/SPEIS does not discuss impacts on different species from radiological and chemical releases.
- Wetland removal and termination of surface water releases. Appendix F should identify all areas of wetland habitat that would be enhanced and managed for the California red-legged frog.
- Grading and maintaining fire trails
- Prescribed annual burning
- Explosive process water surface impoundments and sewage oxidation pond activities

Commentor contended that it is reasonably foreseeable that the California tiger salamander could be spotted on the Livermore Site within the period covered by this LLNL SW/SPEIS, and must therefore be discussed in the biological assessment.

The LLNL SW/SPEIS frequently cites mitigation measures that were approved by U.S. Fish and Wildlife Service (USFWS). Many of these measures were approved and coordinated by USFWS for LLNL in 1998, 3 years prior to the listing of critical habitat in March of 2001 (page E-64, E-68 of the Draft LLNL SW/SPEIS). If critical habitat is reinstated, these measures might not be adequate under the stricter requirements for critical habitat. The LLNL SW/SPEIS needs to discuss updated measures so that the regulators, legislators, and community members can comment on the adequacy of the plans. Mitigation measures for the Alameda whipsnake are especially ineffective because they rely on identification, trapping, removal, and relocation, a highly unlikely scenario when workers are confronted with a snake (page E-94 in Draft LLNL SW/SPEIS). Please describe how LLNL plans to ensure worker compliance with the mitigation measures.

The proposed breeding habitat at the Super High Altitude Research Project (SHARP) Facility is inadequate because that site contains unknown levels of tritium (page E-99 of the LLNL SW/SPEIS). The site also does not have the proper characteristics for a California red-legged frog breeding ground (page E-100 in Draft LLNL SW/SPEIS).

Many of the proposed mitigations require onsite observation by qualified wildlife biologists. However, few places mention whether this biologist would be a lab employee or an independent contractor. It is exceedingly important that wildlife training and mitigation be done by unbiased and disinterested parties.

DOE should address the issue of encroachment.

Proposed wetland mitigation measures are also inadequate. With regards to wetlands at Site 300, the Proposed Action terminates surface releases at Buildings 865 and 851. The LLNL SW/SPEIS states that this was coordinated with the USFWS and received approval contingent upon implementation of mitigation measures in a recent Biological Assessment and related Biological Opinion (Jones and Stokes 2001, USFWS 2002b). Please provide the document submitted to the USFWS.

**Response:** *All proposed projects that occur in or near sites with the potential to impact Federal or state listed or special status species or sensitive habitats are conducted under consultation and opinion with the USFWS; and as needed, appropriate mitigation measures and operating procedures are developed and followed to minimize impacts to the species or habitats. Additionally, LLNL wildlife biologists provide pre-construction surveys on outdoor land disturbance projects to verify the presence or absence of listed or special status species and habitats; and monitor these activities when key species and habitats are present in or near the project site.*

*All utilities, maintenance, and infrastructure projects (such as the Arroyo Las Positas Maintenance Project) follow these requirements. As noted in Appendix E, maintenance of facilities, paved roads, security buffers, and utilities at LLNL pose minimal risk to the listed and special status species and habitats, since these activities are primarily in upland areas where these species do not typically occur. The impact of these activities is minimal and not different among the alternatives. See Chapter 5, Sections 5.2.7, 5.3.7, and 5.4.7.*

*As noted in Appendix E, vehicle traffic occurs on paved roads and bike trails pose minimal risk to the California red-legged frog at LLNL, since this traffic occurs primarily during daylight hours, and also outside of areas where this species is typically present. Invasive species, such as the bullfrog at the Livermore Site's Drainage Retention Basin, is a predator on the California red-legged frog. A Bullfrog Management Program was established to reduce this predator species onsite. This program is coordinated with USFWS to ensure compliance with the Endangered Species Act, as noted in Appendix E.*

*Herbicide applications pose minimal risk to the listed and special status species and habitats because herbicides are applied outside of areas where these species typically occur, and certified pesticide applicators apply these chemicals in accordance with EPA's pesticide labels. As noted in Appendix E, ground squirrel control at Site 300 is performed infrequently and in accordance with EPA rodenticide label instructions.*

*The LLNL SW/SPEIS does not identify the impacts on different species of chemical or radiological releases. Programs are in place to prevent and mitigate chemical and radiological releases.*

*The wetlands being removed near Buildings 801, 827, and 865 at Site 300 have been coordinated with the USFWS as noted in Appendix E, Section E.2.2, and other wetlands at Site 300 would be enhanced as mitigation for loss of habitat for the California red-legged frog.*

*Grading and maintaining fire trails is a necessary activity for the continued operation of Site 300. This activity has the potential to harm the Alameda whipsnakes, as noted in Appendix E. However, such activities have been coordinated with the USFWS, and application of their guidance has, to date, avoided any incidental take.*

*Prescribed burns at Site 300 could result in harm to listed and special status species. The procedures for these burns, described in Appendix E, represent continuation of guidelines in a biological opinion previously issued by the USFWS, which authorized incidental take for the California red-legged frog and the Alameda whipsnake.*

*As noted in Appendix E, Section E.2.2, these explosive process water surface impoundments and sewage oxidation ponds provide suboptimal habitat and therefore, activities in these areas are unlikely to adversely affect California red-legged frog and tiger salamander populations at Site 300. In the future, NNSA is considering closing the impoundments and diverting the wastewater to an aboveground storage tank after consultation with USFWS.*

*The California tiger salamander has not been found at the Livermore Site. If found, NNSA would consult with the USFWS.*

*The LLNL SW/SPEIS cited mitigation measures from biological opinions issued by the USFWS, when they pertained to continuing operations at Site 300 without changes requiring additional mitigative actions. DOE believes these mitigations are adequate for all alternatives evaluated. However, after reviewing the LLNL SW/SPEIS and the related biological assessment, the USFWS may recommend additional guidance through a biological opinion if additional mitigations are considered appropriate to comply with new regulations and listings (e.g., changes in designation of critical habitat). A critical habitat for the tiger salamander has been proposed and does not include either the Livermore Site or Site 300. Though recently rescinded, a critical habitat has been proposed for the California red-legged frog which does include the Livermore Site and Site 300. However, throughout this process, LLNL has continued to implement the mitigation measures and will re-evaluate them based on the final determination of critical habitat following the regulatory procedures for compliance with the Endangered Species Act.*

*DOE is using mitigation measures for the Alameda whipsnake that were issued in a previous biological opinion by the USFWS. Those measures apply to continuing operations with little, or no, change since those mitigation measures were developed. LLNL provides awareness training to workers for identification and mitigation measures for the Alameda whipsnake.*

*The proposed California red-legged frog breeding habitat at the SHARP Facility was submitted to the USFWS.*

*DOE agrees that individuals involved in mitigation be adequately trained and perform work in a professional, unbiased manner. In general, biologists are LLNL employees,*

however, outside biologists may be brought in for specific projects. In addition NNSA has staff that provide oversight of LLNL activities. LLNL biologists submit biological assessments to DOE. After review, DOE submits biological assessments to USFWS for consultation and subsequent issuance of biological opinions.

With regard to encroachment, see Comment Response 09.03.

Wetland mitigation measures associated with the termination of surface water releases at Buildings 865 and 851 were coordinated with the USFWS and in accordance with the biological opinion issued by that agency. USFWS documents cited were made available for review in the DOE reading rooms during the public comment period for the Draft LLNL SW/SPEIS.

**16.03** Commentors expressed a number of concerns regarding the identification of relevant species at each site, the level of detail in which impacts are evaluated and the adequacy of mitigation measures to prevent impacts. Some of the specific concerns included the following:

- Impacts from facility D&D.
- Impacts on different species from radiological and chemical releases.
- Impacts of new construction on threatened and endangered species. Description of how operations are managed to ensure the habitat and breeding of plants and animals is not disrupted.
- Qualifications and level of independence of wildlife biologists who oversee implementation of mitigation methods.

Commentor questioned why the LLNL SW/SPEIS only analyzed a handful of the 124 species listed in Table E.2–1. The LLNL SW/SPEIS only discusses in detail the California red-legged frog, California tiger salamander, and the Alameda whipsnake. Consequently, failure to review the remaining special status species results in an incomplete biological analysis. Commentor contended that the LLNL SW/SPEIS should study the impacts of the proposed activities on the peregrine falcon, a recently de-listed species, but one that is being monitored carefully.

**Response:** *The LLNL SW/SPEIS analyzed in detail three federally listed species that are identified as threatened, endangered, or proposed for listing under the provisions of the Endangered Species Act. A number of additional bird species are included in Tables 4.9.3–1 and E.2–1 that are protected by the Migratory Bird Treaty Act. LLNL provides protection for these birds by ensuring that their nests are not damaged, and no take occurs of eggs, young, or adult birds. Information on migratory birds is provided in Section E.1. The activities of the LLNL biologists are overseen by the NNSA Livermore Site Office and are coordinated with the USFWS. Additional information related to this response can be found in Comment Response 16.02. The peregrine falcon has been de-listed as noted by the commentor. Neither nesting nor foraging peregrine falcons were observed during a raptor study conducted at Site 300 in 2002 (Bloom 2002). The study's*

*author noted that it is unlikely that peregrine falcons will nest at Site 300, because only small cliffs are present at the site, while this species prefers to nest on large cliffs.*

- 16.04** Commentor requested that DOE describe any other comparable grasslands to Site 300 and the value of this land. Alternatives should be analyzed for explosive testing sites. A cost-benefit analysis with alternatives should be completed to see if other options are feasible.

**Response:** *DOE/NNSA does not have any proposal to move Site 300 operations to another location or to close that site. The range of reasonable alternatives developed within this LLNL SW/SPEIS maintains LLNL's core mission and operations and responds to the programmatic purpose and need for critical support of NNSA's Stockpile Stewardship Program. Therefore, a search of comparable grasslands to Site 300, and related cost-benefit analysis, is outside the scope of analysis for this LLNL SW/SPEIS. Appendix E, Section 2.1 and Section 2.2 have been updated concerning newly proposed critical habitats for the California red-legged frog and the California tiger salamander.*

- 16.05** Commentor requested that DOE provide possible impacts to the environment and special status species from daily and weekly explosives testing. These tests could cause direct mortality of California red-legged frogs, Alameda whipsnakes, and California tiger salamanders, as well as some birds protected under the *Migratory Bird Treaty Act*. There is little discussion of the impact of the explosions on these species. Diurnal raptors (e.g., northern harrier, black-shouldered kit, ferruginous hawk, and red-tailed hawk) that forage directly over the facilities will be the most vulnerable to flying debris and shock overpressure. Commentor questioned the potential impact on these bird populations and their habitat, and availability of surrounding habitat. Commentor expressed concern regarding the impact of facility operation on species that forage and travel at night.

**Response:** *The Proposed Action includes no increase of outdoors explosive testing and therefore poses no additional risks. Site 300 facilities have operated for years with minimal impact to these species. In addition, some experiments that have traditionally been performed at the three operational firing tables are now conducted in the Contained Firing Facility. Operations at the Livermore Site and Site 300 occur primarily during daylight hours, minimizing the impact to species active at night. LLNL operations pose minimal impact to protected species that forage and travel at night as discussed in Appendix E (Ecology and Biological Assessment).*

## **17 AIR QUALITY**

- 17.01** Commentor expressed concern regarding tritium releases and mitigation measures to prevent or minimize additional contamination at Site 300. Commentor questioned why there is an assumed release of tritium for the No Action Alternative, but there were no releases in 2001. Commentors stated that the community was assured in 1992 that no tritium would be used in shots. Please correct the inconsistency regarding tritium emissions from hydroshots, given in Section 3.4.7 and those in the 2003 LLNL

document. Commentors questioned why the Livermore Site has tritium monitors, but Site 300 does not. Please explain this discrepancy.

Several commentors expressed concern regarding tritium impacts due to encroachment. Regarding tritium shots at Site 300, the LLNL SW/SPEIS should discuss for each alternative:

- How many shots are planned per year?
- Where will these shots be conducted?
- How much tritium will be in proposed shots? What are the byproducts? How much depleted uranium will be used?
- Impacts to human health and environment
- Impacts to groundwater
- What disposal method will be used for all different types of debris?
- Have they undergone environmental modeling?
- How are these activities reported?

**Response:** *Comment Response 17.02 addresses mitigation measures, long-term effects, and past releases.*

*There were no releases of tritium from shots at Site 300 in 2001 because no shots using tritium were performed. However, such shots have been performed in the past at Site 300. Such shots remain part of the programmatic mission of the Site. It is expected that tritium shots will be performed in the future as part of this mission, therefore, tritium releases were assumed for both the No Action Alternative and the Proposed Action. Section 3.4.7 describes the tritium emissions from shots for the Reduced Operation Alternative. This is a reduction from tritium emissions for the No Action and Proposed Action alternatives. The emissions presented in that section for the various alternatives are conservative estimates based on the best available information.*

*Tritium monitors at the Livermore Site monitor the long-term continuous release of tritium from stationary sources, such as the Tritium Facility. Tritium releases from Site 300 would be associated mainly with shots. The quantity of releases from these shots are well known based on past experience.*

*The number and size of individual shots each year depends on programmatic considerations. As noted in Section 5.2.8, firing tables at Buildings 812 and 850 will not be used for tritium experiments. The firing table at Building 851 is the only open-air facility that would use tritium. It is expected that tritium would also be used in shots in the Contained Firing Facility. As noted in Sections 5.2.8 and 5.3.8, up to 20 milligrams (194 curies) of tritium may be released annually for the No Action and Proposed Action alternatives. As given in Section 5.4.8, up to 15 milligrams (145 curies) of tritium may be released annually for the Reduced Operation Alternative. Tritium released to the atmosphere is assumed to be tritiated water. The amount of depleted uranium released for each of the alternatives is expected to be similar to that released in recent years. As shown in Table 4.10.5–1, the depleted uranium released during 2001 was 0.065 curies,*

which represents the largest annual release during the 6-year period ending in 2003 for which information is available. Utilizing this value was a conservative assumption for impact analyses. Human health impacts from Site 300 shot releases are described in Sections 5.2.14.2, 5.3.14.2, and 5.4.14.2. They are discussed further in Appendix C, Section C.4.2. Impacts to the environment are described in Sections 5.2.8.2, 5.3.8.2, and 5.4.8.2. Both the human health impacts and environmental impacts are small. Because the atmospheric concentrations of tritium are orders of magnitude below regulatory standards, these releases are expected to have an insignificant impact on groundwater. This impact assessment considers encroachment as appropriate.

Appendix B, Section B.1.4, describes radioactive and hazardous waste management facilities at Site 300. These facilities include Building 883 Container Storage Area (hazardous wastes), Building 804 and Building 883 Waste Accumulation Areas (low-level radioactive wastes), the Explosive Waste Storage Facility and the Explosive Waste Treatment Facility at Building 845. Appendix A, Section A.3.2.21 describes the handling of debris. Low-level radioactive waste and chemically hazardous waste are segregated. The former is placed in containers and transported to the Building 804 waste staging area. All nonexplosive contaminated hazardous waste is transported and stored at Building 883 prior to shipment to Livermore Site for treatment or to an offsite disposal facility. Washdown water from the Contained Firing Facility is diverted to a holding tank, filtered and reused. If sampling of the water indicates the necessity for its disposal, it would be transferred to the Livermore Site for discharge to the sanitary sewer, if parameters are within acceptable limits, or transferred to the Radioactive and Hazardous Waste Management Complex for appropriate disposal. All of the LLNL areas have undergone hazard assessments. Appendix B contains the environmental impacts of LLNL Waste Management activities and refers to other site documents on this subject (e.g., see Section B.1.3). Section 5.1.8 describes environmental monitoring and the annual National Emission Standards for Hazardous Pollutants (NESHAP) report.

LLNL waste management activities are conducted in accordance with applicable requirements as described in Appendix B.

- 17.02** Commentor expressed concerns regarding tritium contamination and mitigation measures to prevent or minimize additional contamination at the Livermore Site. DOE should assess the long-term effects and impact of past tritium releases from LLNL.

Commentors expressed specific concerns regarding tritium activities at the Livermore Site:

- Is the proposed increased level of tritium activities leading to an “unavoidable” increase in airborne emission levels of tritium?
- Can HEPA filtration efficiency of 99.97 percent be improved? Can the proposed overall increased level of radionuclide activity be met with constant or reduced airborne waste emission levels?
- What airborne sources of background radiation exist which yield a dose level of 200,000 times greater than emissions from LLNL?

- The statistics for comparing radiation dose from LLNL operations versus background sources as listed in Table 4.16.2.1–1 do not appear to be logical. What population base should be used to compare the columns of millirem to person-rem? For example, does the atmospheric maximally exposed individual (MEI) dose of 0.12 millirem compare to 0.085 millirem, i.e., a 1.7 person-rem population dose for a population of 20,000?
- Table 4.16.2.2–1 indicates a continuing increase in worker dose from a level of 6.9 person-rem in 1998 to a level of 28.0 person-rem in 2002. How does this coincide with a decreased risk versus the general population? Why is the level increasing? Can the level be expected to increase further with the proposed activity levels?
- What activities or efforts will be implemented over the next 10 years to control and minimize the release of toxic materials? What type of monitoring is in place or will be in place relating to potential releases of toxic materials?

**Response:** *Specific examples of mitigating tritium releases to the environment are described in Appendix A, Section A.2.2.31, and include engineered ventilation system to protect workers and to control the release of radioactive material, maintenance of pressure gradients so that air flows toward (rather than away from) internal building areas of increasing contamination potential, and the quick dilution of tritium through two 100 foot high continuously monitored stacks. In addition, the Tritium Facility Modernization project includes cleanup, decontamination, and removal of tritium contaminated equipment (see Appendix A, Section A.2.3.11).*

*The Proposed Action does not include an increase of tritium releases above historical levels. Section 4.10.5 describes historical tritium releases. Impacts (the majority of which are from tritium) in terms of dose from all radioactive releases for the period 1998-2002 are indicated there. It is shown that these impacts are far below regulatory limits. Impacts from earlier years can be found in site documents such as Site Annual Environmental Reports and NESHAP Annual Reports.*

*The HEPA filters and their operation is discussed Appendix D, Section D.2.2.2. LLNL uses commercially available HEPA filters and would consider improved HEPA filter designs if available for removal of particulates. HEPA filters remove particulates but not gases.*

*Population doses received from LLNL releases are approximately 200,000 times less than that received by the population from background radiation (see Section 4.10.5.2). This includes all background exposures such as radon, medical exposures, food consumption, cosmic radiation, terrestrial radiation, and weapons test fallout (see Table 4.16.2.1–1).*

*The population dose (person-rem) in Table 4.16.2.1–1 was calculated for the entire population within 50 miles of each Livermore Site, approximately 7 million people. The MEI dose (millirem) and population dose (person-rem) are not meant for comparison with each other. The MEI dose represents a dose to a hypothetical person permanently*

located at the offsite location of maximum exposure and thus represents a dose greater than any individual would receive. The MEI dose (0.33 millirem per year) is 0.4 percent of the DOE standard of 100 millirem per year for the general public. It is unlikely that the low population dose resulting from site emissions would increase the number of cancers occurring naturally (approximately 11,000 per year) within the entire 7 million person population surrounding LLNL.

Worker dose can be expected to increase with increasing LLNL activities. The increase in activities since 1998 is reflected in the number of workers included in Table 4.16.2.2–1 for years subsequent to 1998. However, worker dose is also subject to year-to-year variations; the worker dose in 1997 was 22.1 person-rem. The worker dose is expected to be approximately 89, 93, or 38 person-rem for the No Action, Proposed Action, or Reduced Operation Alternatives, respectively (Appendix C, Table C.3.3–1).

The dose to the general population from proposed activity levels are expected to be approximately 1.8 person-rem from the Livermore Site and 9.8 person-rem from Site 300 (Table C.3.3–1). These doses are comparable to doses seen within the period 1998–2002 (Table 4.10.5–2). Chapter 4, Section 4.10.4 describes programs at LLNL that control and minimize the release of toxic materials. Chapter 4, Section 4.16.1 describes programs implemented at LLNL to monitor and protect the health of workers.

- 17.03** Commentor stated that the LLNL SW/SPEIS should quantify, for each criteria pollutant, the reasonably foreseeable construction emissions for the fully evaluated alternatives. Quantifying reasonably foreseeable construction emissions informs the public and decisionmakers on the project's air quality impacts and helps to identify appropriate mitigation at each for nonattainment pollutant. The LLNL SW/SPEIS should evaluate the feasibility of mitigation measures to reduce construction emissions and include appropriate commitments in the NEPA Record(s) of Decision.

Commentor stated that all D&D activities have not been thoroughly taken into consideration. The commentor stated that the LLNL SW/SPEIS should discuss all air quality and contamination issues related to D&D. Potential adverse air quality effects from D&D waste transport and eventual disposal facilities should be discussed.

Commentor stated that in Table 3.6–1 the only significant non-radiological airborne pollutant described is carbon monoxide. On page 4.7-7, it is indicated that vertical mixing to dilute pollution is not conducive with the topology of the Livermore Valley. In general, the valley is a nonattainment area for compliance with particulate pollution. The number of exceedances has increased each year as seen in Figure 4.10.2–2. The commentor expressed the following concerns regarding air quality:

- What effects on the outside air quality will occur by the generation of debris particulates (e.g., PM<sub>2.5</sub> and PM<sub>10</sub> in Table 4.10.1–1) during demolition processes?
- How long will the effects last?
- Standard practices are indicated in Section 5.2.8.1 and Appendix B for D&D.

Will these activities be conducted as guided by the as low as reasonably achievable (ALARA) principle?

- To gauge the appropriate level of regulation consistent with particulate generation (Section 5.1.8.1), will there be onsite monitoring of particulate pollution?
- Which respiratory effects are magnified in the general population from an increase in airborne particulates?
- How do these activities differ from the airborne particulates generated by other outside activities in Livermore, e.g., ongoing housing developments?

**Response:** *As stated in Section 5.1.8, the Bay Area Air Quality Management District's (BAAQMD) approach to analyses of construction impacts is to emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. At a minimum, all construction projects must comply with appropriate feasible control measures designed to reduce emissions of respirable sized particulates (PM<sub>10</sub>) from construction activities as set forth by the BAAQMD. Basic Measures would be implemented at all construction sites, regardless of size; Enhanced Measures would be implemented at larger construction sites (greater than 4 acres) where PM<sub>10</sub> emissions generally would be higher; and Optional Measures may be implemented if further emission reductions are deemed necessary by local agencies. Chapter 5, Sections 5.2.8, 5.3.8, and 5.4.8 have been updated to include air conformity analysis for construction activities.*

*The LLNL has active pollution prevention (Appendix O) and mitigation programs (Section 5.6.9) designed to reduce air emission during construction, operation, maintenance, and facility D&D. Construction is defined to include building, renovating, modifying, painting, decorating, repairing, or demolishing of facilities and structures.*

*Fugitive dust is controlled by water spraying of disturbed areas and covering exposed piles of excavated material; engineering controls, devices, and work practices during work with asbestos to isolate the source of asbestos and prevent fiber migration. In addition, the LLNL mitigation program requires that fuels must meet the requirements of the Clean Air Act and Power Plant and Industrial Fuels Use Act, and applicable DOE orders, together with the requirements imposed by both state and local agencies aimed at reducing emissions of criteria air pollutants and diesel particulate matter. In addition, the State of California is leading the Nation in requirements for effective control of emissions and exposure from the combustion of diesel fuel. LLNL would also continue to require that construction equipment and vehicles be inspected daily for leaks of fuel, engine coolant, and hydraulic fluid; and architectural coatings must comply with strict air district regulations on organic content. Finally, LLNL has a transportation systems management program that provides and promotes alternative, environmentally responsible, options for employee commuting (including construction subcontractors), assists LLNL in complying with transportation-related Clean Air Act legislation, and resolves congestion management issues. LLNL would continue this program.*

*LLNL would also continue to include standard measures for controlling pollution as part of every construction subcontract. To aid in the identification of appropriate mitigation*

measures during project planning, LLNL requires that subcontractors complete a project-specific task identification process list for all construction projects. This list, a questionnaire listing typical concerns and hazards, helps subcontractors identify potential topics and requirements related to air resource protection to be addressed in project-specific compliance plans and during facility construction. In addition, the LLNL Environmental Protection Department, Hazards Control Department and Plant Engineering staff review all designs and provide guidance on construction projects, review the task identification process list prior to commencing construction, and routinely inspect construction work sites to ensure adherence to project-specific requirements. LLNL further requires its subcontractors to obey all applicable Federal, state, and local regulations. These measures are designed to ensure compliance and minimize the potential for contamination or unique exposure.

With respect to D&D activities, as discussed in Sections 3.2.10 and 3.3.19, D&D actions are included in the alternatives evaluated in this LLNL SW/SPEIS. Chapter 5 contains impacts related to D&D. However, the air quality impacts from disposal operations that are not within the LLNL region of influence are beyond the scope of this LLNL SW/SPEIS; those facilities are covered by either site-specific NEPA documents and/or permitting documentation. With regard to radiological contaminants associated with D&D, there would be no significant air quality impacts from radioactive releases during transportation (see Appendix J).

- 17.04** Commentor expressed concern regarding the amount of radioactive and hazardous contamination released into the air from LLNL. The air quality in the San Joaquin Valley and Alameda County is among the worst in the Nation. The LLNL SW/SPEIS should acknowledge this and explain the incremental, cumulative, and synergistic impacts of releases for current and future LLNL activities. The LLNL SW/SPEIS should evaluate the feasibility of mitigation to reduce radiological emissions to the extent practicable at the Livermore Site and Site 300. Should this mitigation be feasible, include appropriate commitments in the NEPA Record(s) of Decision. Commentors expressed concern about future power plants in the region.

**Response:** *The air quality in the San Joaquin Valley and Alameda County is discussed in detail in Sections 4.10.2.1 and 4.10.2.2. Nonattainment pollutants are identified and local monitoring data is provided, along with descriptions of the very stringent “no net increase” and “all feasible control measure” programs designed to bring the regions into attainment. The state and local air toxic control and assessment programs are also detailed. These air quality control programs are significant in that they limit the impact of LLNL activities as well as the cumulative growth in emissions in each of the air basins, which is also discussed in the air quality impact sections.*

*The incremental and cumulative impacts of radiological releases are explained in Sections 5.2.8.2, 5.3.8.2, and 5.4.8.2. These sections explain that the incremental impacts are very small and that there are no cumulative impacts. There are no expected synergistic impacts from radiological releases.*

*As discussed in Chapter 4, Section 4.10.5, LLNL reduces radiological emissions to the extent practicable through a number of programs which include work practices and control devices and identifies those in its planning tools, such as Integration Work Sheets, Facility Safety Plans, and Operational Safety Plans. As discussed in Chapter 5, Section 5.6.9, LLNL has mitigation measures in place governing construction activities and fuel use to minimize air emissions including: water spraying of disturbed areas and covering exposed piles of excavated material; engineering controls, devices, and work practices during work with asbestos to isolate the source of asbestos and prevent fiber migration; and requirements that construction equipment and vehicles be inspected daily for leaks of fuel, engine coolant, and hydraulic fluid.*

*The LLNL Integrated Safety Management System integrates environmental safety and health protection to the public, workers, and environment into management and work practices. The LLNL Pollution Prevention Program is designed to minimize pollutant releases to all environmental media from all aspects of the site's operations. New processes and experiments are reviewed to consider possibilities for mitigation actions such as chemical substitutions, process changes, and material recycling. New projects are designed with the goal of minimizing or mitigating potential environmental impacts through project modifications at the design stage. The Site Annual Environmental Reports (environmental protection information) and Appendix C of the LLNL SW/SPEIS discuss these mitigation programs further.*

*For information regarding future power plants in the region, see Comment Response 23.02.*

- 17.05** Commentor questioned the derivation of Maximum Exposed Individual (MEI) dose in Section 3.6.5 for radiological air emissions from normal operations at the Livermore Site and Site 300.

**Response:** *The methodology used to derive the MEI is described in Section 5.1.8 and more fully in Appendix C, Section C.4.2.2. The site-wide MEI dose is the sum of the dose contribution from each site facility at the offsite location of maximum exposure, as determined in the 2001 (baseline year) NESHAP report. A facility's contribution to the MEI was incremented if additional releases above those of the baseline year were included in any of the alternatives. The most significant increment to an existing facility at the Livermore Site was from increases in Building 331 tritium releases for each of the alternatives; the dose increment was determined by scaling the baseline MEI dose component by the ratio of the tritium expected to be released for that alternative to that of the baseline year. In addition, the dose from NIF (not a part of the baseline dose) was calculated using the CAP88-PC computer code as described in the above referenced sections of the LLNL SW/SPEIS. The location of the Livermore MEI changed from the Credit Union to the site boundary due east of the NIF stack due to the addition of releases from NIF. The site-wide MEI value at the Credit Union for all facilities except NIF was added to the MEI dose from NIF. This increases the conservatism of the estimated dose to the MEI. The MEI dose at Livermore is not sensitive to the choice of*

*baseline year because the major contributions (from Tritium Facility and NIF releases) to this dose were calculated specifically for the releases associated with each alternative.*

*The MEI dose from the firing table at Building 851 was calculated in a similar manner. The baseline dose from that firing table was chosen as 2001, the year of maximum MEI dose during the 5-year period of 1998-2002. The baseline dose was incremented for the expected tritium release for each of the alternatives (the baseline year did not include any tritium releases, see Comment Response 17.01). The tritium component of the MEI dose from the firing table at Building 851 was calculated using the CAP88-PC computer code as described in the referenced LLNL SW/SPEIS sections.*

- 17.06** Commentor expressed concern regarding shots on open air firing tables at Site 300. The LLNL SW/SPEIS should for each alternative, address what pollutants are released during shot testing, the proposed methods of disposal for shot debris, the feasibility of reducing the number of open air shots, and the reasonably foreseeable impacts on environmental restoration activities.

**Response:** *The radiological releases and debris disposal methods are described in Comment Response 17.01. Appendix A, Section A.3.2, describes the debris and the proposed methods of disposal for each of the firing tables. The number of open air shots would be determined by programmatic considerations and the chosen LLNL SW/SPEIS alternative. Use of the Contained Firing Facility would reduce the emissions from open air shots, because the effluent from each Contained Firing Facility shot would be kept within the facility.*

- 17.07** Commentor expressed concern regarding lack of discussion of controlled burns at Site 300. Because the EPA has designated the region as out of compliance with their air quality guidelines, commentor questioned the amount of contamination released during controlled burns and suggested alternative control measures (i.e., mowing, grazing by goats). Because Site 300 is also contaminated with tritium and uranium, release of these radioactive elements by fire should be discussed. Commentor requested that the LLNL SW/SPEIS consider a massive wildfire that cannot be controlled by a present fire fighting capability.

**Response:** *LLNL conducts controlled burns at Site 300 to mitigate the risk of wildfires as discussed in Chapter 4, Section 4.10.4.7. Included in this discussion is the rationale for conducting controlled burns versus grazing, mowing and herbicides. In general, LLNL impacts on tritium concentrations in vegetation at Site 300 are insignificant (LLNL 2003I). No indication of uranium in Site 300 vegetation has been found; therefore, no impact from uranium released during a fire is expected. Concentrations of uranium in Site 300 soils are generally representative of background. Areas of uranium concentrations above background are present near some of the firing tables; tritium contamination can be associated with areas of elevated groundwater concentrations. Controlled burning at Site 300 prohibits the build up of vegetation. As discussed in Appendix D, a range of reasonable bounding accidents was analyzed. Although an accidental wildfire was not a credible bounding accident, Appendix D presents impacts*

*from fires affecting specific facilities, as appropriate. Appendix I includes a summary of emergency planning and response activities established to mitigate the consequences of major emergencies and natural disasters at LLNL.*

## **18 WATER**

**18.01** Commentor questioned how increases in nuclear and hazardous materials will impact groundwater. Commentor expressed concern regarding elevated levels of tritium in Livermore groundwater wells because Livermore is a closed water basin and depends on deep wells for water. Some commentors requested that LLNL discuss waste management plans and water quality monitoring to prevent groundwater contamination from the EMPC and the existing high explosives process area. Commentor also questioned:

- What are the current levels of tritium in water aquifers in all deep wells situated in Livermore Valley?
- Were wells in the greater community tested or monitored for tritium levels? When was the last testing? How frequently are they tested?
- Were all significant sources of water tested for tritium regardless of distance from the lab?
- Have known plumes tested higher or lower for tritium levels?

**Response:** *No major impacts to groundwater are identified from the proposed increases in nuclear or hazardous materials as discussed in Chapter 5, Section 5.3.9.2. LLNL implements both administrative (e.g., training to implement emergency response actions to expeditiously clean up spills) and engineered (e.g., use of secondary containment systems) controls to minimize the impact of accidental releases.*

*With regard to tritium in groundwater, LLNL performs both routine monitoring of onsite and offsite sampling locations, including wells, in accordance with DOE Order 450.1 Environmental Protection Program and DOE Order 5400.5 Radiation Protection of the Public and the Environment as discussed in Chapter 4, Section 4.11. Groundwater monitoring with regard to CERCLA requirements is discussed in Section 4.17. Results of the routine sampling are reported each year in the Site Annual Environmental Report for LLNL (LLNL 2003l). Tritium activity levels in known plumes have decreased over time, as discussed in Section 4.11.3.4. This monitoring program adequately characterizes the effect of LLNL operations on the aquifer.*

*Chapter 4, Sections 4.11 and 4.15 discuss programs implemented at Site 300 for monitoring groundwater, surface water, and controlling the use of hazardous materials. EMPC would be included in these monitoring programs and its operations would be implemented by trained personnel following approved procedures. EMPC operations would also be included in the LLNL's procedures for compliance with 40 CFR § 112.3 EPA, "Protection of the Environment, Oil Pollution Prevention, Requirement to Prepare and Implement a Spill Prevention, Control, and Countermeasure Plan."*

**18.02** Commentor requested that the LLNL SW/SPEIS address the impact of additional radiological emissions on surface water. Commentor expressed concern regarding tritium contaminated rainfall. Commentor requested analysis of the potential impact on groundwater from using the proposed materials on NIF. Commentor asked whether the existing groundwater monitoring network would detect these materials. Commentor stated that impacts to groundwater from underground storage tanks should be evaluated. Commentor questioned why release potential to groundwater and surface water would not increase when the use of radioactive and hazardous materials is increased.

**Response:** *Radiological emissions for all alternatives analyzed are well within historical ranges. The LLNL SW/SPEIS discussed the occurrence of radionuclides in rainwater and stormwater in Chapter 4, Section 4.11.2. As discussed in Appendix C, LLNL implements programs to provide safe working conditions for employees and to limit exposures of the general public in the vicinity to hazardous and radioactive materials. These programs are conducted in accordance with regulatory requirements and include implementation of administrative and engineered controls to minimize potential releases as well as surveillance monitoring of the environment and reporting of exposure assessments. For instance, impacts to groundwater from leaking underground tanks are not expected since LLNL complies with underground storage tank regulations that require the use of tank and piping primary and secondary containment, detection and monitoring systems, and corrosion protection. Groundwater monitoring is discussed in Comment Response 18.01.*

**18.03** Commentor expressed concern regarding the impacts LLNL would have on water consumption and suggested evaluating an alternative proposal that discontinues the Terascale Simulation Facility.

**Response:** *Water consumption is discussed in Chapter 4, Section 4.14 and Chapter 5, Sections 5.1.12, 5.2.12, and 5.3.12. Increases in consumption are within the existing capacity of the water distribution system. As explained in Chapter 3, Section 3.2.3, the Terascale Simulation Facility is currently under construction and is scheduled to be operational in FY2005. The Terascale Simulation Facility will support the Stockpile Stewardship Program. The Reduced Operation Alternative assesses operation of this facility at 60 percent capacity. Any alternative that would discontinue the Terascale Simulation Facility is considered unreasonable.*

**18.04** Commentor stated that Zone 7 would need to assess fees if there are increases in impervious areas. Fees are collected for any development creating new impervious areas that would contribute runoff to Zone 7's flood control facilities. Increased runoff from impervious areas will most likely affect Zone 7 flood control facilities Line P (Arroyo Seco) and Line P-1 (Arroyo Las Positas) adjacent to the Livermore Site. A hydraulic study should be performed to show that additional runoff will not have an adverse effect on the 100-year water surface elevation in Zone 7 facilities.

**Response:** *Because of the D&D of existing facilities, the Proposed Action does not include any net increase in impervious areas within Zone 7 flood control jurisdiction and therefore would not have an adverse effect on the 100-year water surface elevation in*

*Zone 7 facilities. Appendix A, Section A.2.4.18 describes D&D of existing facilities included in the Proposed Action.*

## **19 NOISE**

No comments were received related to noise.

## **20 TRAFFIC AND TRANSPORTATION**

**20.01** Commentors questioned why the LLNL SW/SPEIS did not consider accidents during transport. What is the possibility of a transportation accident on any given road? Please provide detailed information on the exact corridors and anticipated amounts of materials of all types to be transported along them. Corridors and anticipated transit should consider both accesses to and from LLNL. The LLNL SW/SPEIS should also provide route-specific data, type of material and packaging used, maximum allowable quantities shipped as well as recent population and truck accident data. DOE should identify shipments that would require DOE security escorts. In addition, commentor questioned the frequency, schedule, and security of shipments. Commentor stated that the LLNL SW/SPEIS should provide an estimate of the number of highway route-controlled quantity shipments projected from LLNL to Waste Isolation Pilot Plant (WIPP). Commentor questioned the risk of an accident or terrorist attack from a container breach of one of these shipments. Commentors were concerned about transportation of waste across the country specifically to Hanford and the Savannah River Site.

The LLNL SW/SPEIS should discuss potential exposure to truck drivers, other transportation workers, and vehicles in traffic. Commentor expressed concern regarding the amount of latent cancer fatalities (LCFs) involving transportation and questioned the LCFs for each alternative. The calculated LCFs for the No Action and Proposed Action alternatives are above EPA's range of acceptable cancer risk standards. Commentors suggested that DOE provide more information and review on radiological and hazardous waste shipments.

**Response:** *The methodology to analyze the radiological impacts of traffic and transportation are presented in Chapter 5, Section 5.1.11, including the use of TRAGIS and RADTRAN 5. Bounding transportation accidents are presented in Chapter 5, Section 5.5, which is supported by Appendix D and Appendix J. The presentation provides probabilities of occurrence where they are available and the number of shipments.*

*Section 5.1.11 describes the methodology used to determine transportation impacts. For purposes of analysis, NNSA used the computer code TRAGIS to identify routes and route demographics for shipments of radioactive materials and wastes. The code determines routes based on criteria supplied by NNSA and takes into account special provisions for highway route-controlled quantities. However, the routes that are ultimately selected would depend on conditions at the time of shipment and cannot be predicted in advance. Shipments by commercial carriers are not under the control of NNSA and cannot be predicted. Therefore, the LLNL SW/SPEIS does not identify any specific routes. The*

timing and frequency of the shipments would be determined by operational constraints and cannot be predicted at this time. NNSA would follow all internal procedures and Federal and state regulations for all shipments to ensure safety and security.

Doses to truck drivers are presented in Table J.3–1 in Appendix J, for incident free transportation. As shown in that table, the maximum collective dose to drivers would be less than 1 person rem in all cases evaluated. This dose would be well below regulatory limits imposed by DOE and the Nuclear Regulatory Commission (NRC), as appropriate. Health and safety impacts to workers are discussed in Appendix J.

Regarding risk numbers, commentor has compared quantities that are not comparable. The number of LCFs from incident-free transportation reported in the LLNL SW/SPEIS is  $5 \times 10^{-3}$  per year for the Proposed Action. The EPA risk range for cleanup of Superfund sites is  $10^{-6}$  to  $10^{-4}$  over a lifetime. The EPA values are equivalent to the probability of an individual getting cancer (cancer incidence, not necessarily cancer fatality). The value provided for LLNL transportation under the Proposed Action is an estimate of the number of the exposed individuals (of a very large population) who will get a fatal cancer. Because the number of individuals estimated to die from cancer under the Proposed Action transportation impacts would be very much less than one ( $5 \times 10^{-3}$  LCFs), one could conclude that no one in the exposed population is expected to incur a fatal cancer.

In preparing the LLNL SW/SPEIS, NNSA examined the shipment history of LLNL with respect to hazardous and radioactive shipments and decided to specifically analyze those shipments that are of most interest and present the greatest risk. Without penetrating radiation, nonradioactive hazardous shipments would have minimal impact to the public unless there is some accident that releases the contents. The numbers of such shipments to or from LLNL are extremely small compared to the numbers on the highways from all other causes. Radioactive shipments have the potential to impact members of the public and are more specific to LLNL (although not unique) when compared to the baseline of shipments on the U.S. highways. However, the majority of radioactive shipments examined were very small packages shipped by mail or commercial express carriers, containing extremely small quantities of radioactivity. Any quantitative analysis of such shipments would yield extremely small values. Accordingly, DOE decided to report the total numbers of hazardous (hazardous and radioactive), as indicated in the comment, but to quantitatively analyze only those of special interest: the larger radioactive shipments, including special nuclear material, low-level waste, tritium, and small amounts of miscellaneous radioactive material. The results of this analysis of current operations are found in Chapter 5, Table 5.2.11.2–1.

Current plans are that transuranic waste drums at LLNL would be shipped directly to WIPP. WIPP is located 26 miles east of Carlsbad in southern New Mexico, and its operations are not within the scope of the LLNL SW/SPEIS. WIPP operation was evaluated in the Waste Isolation Pilot Plant Final Supplemental Environmental Impact Statement (DOE 1997e). Appendix J analyzes annual transportation of waste shipments to WIPP, including the number of shipments.

*For issues associated with terrorism concerns, see Comment Response 30.01.*

- 20.02** Commentor stated that the LLNL SW/SPEIS only considers accidents involving transport of LLNL vehicles and personnel, failing to address waste stream transportation carried out by private contractors and vendors. Commentor questioned what proportion of shipments will be handled by commercial contractors and what the impacts of choosing commercial contractors would be versus lab employees.

**Response:** *Although data regarding the proportion of shipments by DOE truck verses commercial vehicles is not available or necessary for environmental analyses, the information that follows is relevant to the commentor's question. NNSA generally transports transuranic (TRU) waste and special nuclear material in DOE vehicles with DOE drivers; however, most other material is transported by commercial carrier. NNSA ensures that commercial carriers are qualified and adhere to Federal and state regulations. The LLNL SW/SPEIS analyzes transportation impacts irrespective of the particular carrier.*

*NNSA selected bounding transportation accidents to present. The environmental impacts from bounding transportation accidents are presented in Chapter 5, Section 5.5, which is supported by Appendix J and Appendix D. As reported in Table J.4–2, NNSA examined transport of special nuclear material and TRU waste, which are generally transported by DOE drivers in DOE vehicles. Tritium, may be transported by DOE or commercial carrier depending on the shipment. Low-level waste is generally transported by commercial carriers. Therefore, the LLNL SW/SPEIS does analyze accidents involving private contractors and vendors. The bounding accidents analyzed in the LLNL SW/SPEIS are independent of the shipper.*

- 20.03** Commentor stated that the Circulation Element of the recently adopted 2003 General Plan identifies several proposed transportation improvements in the vicinity of LLNL. Specifically, road improvements, such as adding lanes, will be made along the Vasco Road Interchange and the Greenville Interchange. The LLNL SW/SPEIS does not adequately address the traffic impacts of the Proposed Action or the alternatives. Traffic is expected to increase by 1,100 daily trips over the No Action Alternative, however, the LLNL SW/SPEIS does not distribute the project trips to the roadway network to determine significant impacts. There are roadways and intersections providing primary access to the Livermore Site that have poor levels of service under existing conditions. Specifically I-580 near Vasco Road, and Vasco Road near I-580 have existing and forecast future congested traffic conditions. The city of Livermore requests the LLNL SW/SPEIS discuss the following traffic impacts:

- What are the existing and future levels of service on I-580 between First Street and Grant Line road both and with and without the Proposed Action?
- What are the existing and future intersection levels of service along Vasco Road and Greenville Road between I-580 and East Avenue both with and without the Proposed Action?

- What are the impacts of the Proposed Action to I-580, Vasco Road, Greenville Road and the signalized intersections?
- What traffic improvements are proposed to mitigate the congested conditions resulting from the Proposed Action?
- What affect does non-auto transportation (e.g., bus, bike, pedestrian, ACE) have on reducing auto traffic impacts?
- What is the Proposed Action’s fair share mitigation costs relating to transportation impacts and what funding is available? The city has calculated an estimated fair share contribution towards transportation improvements based on information provided in the Draft LLNL SW/SPEIS. With an estimated 6.6 percent of future traffic growth on Vasco Road attributed to the Proposed Actions, a preliminary fair share contribution or improvements to Vasco Road and the Vasco Road Interchange is estimated at \$3.1 million.

**Response:** Chapter 5, Section 5.3.11 states that the Proposed Action would increase employment at LLNL by approximately 500 jobs. This represents a total increase of employment of approximately 5 percent in the Livermore Site workforce. This is a small fraction of the current traffic level near LLNL. The incremental contribution from the Proposed Action over the No Action Alternative would be small; therefore, no additional analysis is needed to meet NEPA requirements. As discussed in Section 4.13.2 of the LLNL SW/SPEIS, I-580 carries approximately 120,000 vehicles per day and experiences significant congestion during peak commute hours in the Livermore vicinity. Road improvements near the LLNL site are being considered and will be required in the future, regardless of decisions that would be made regarding this LLNL SW/SPEIS. The city of Livermore is developing a major traffic model to forecast future traffic volumes and impacts. Such modeling will assist in determining the specific road improvements that will improve traffic flow. Such road improvements could include modifications to interchanges, road widening, new roads, and adjustments to signalization. Funding issues associated with any future road improvements are beyond the scope of the LLNL SW/SPEIS. It is acknowledged that non auto modes of transportation (e.g., bus, bike, pedestrian, ACE) would reduce traffic and congestion; however, assessing the impacts of such modes of transportation is beyond the scope of this analysis.

- 20.04** Commentor expressed concern regarding shipments of explosive materials to and from Site 300, especially along the unimproved Corral Hollow Road. Commentor questioned impacts from transport including radiation exposure, accidents, and terrorist activity.

**Response:** Chapter 5, Section 5.5.5.3 presents the impacts from explosives transportation accidents. As explained in that section, potential impacts include death or severe injury to the driver(s) and passengers in adjacent vehicles. This conclusion remains valid for any road in which an accident might occur, including Corral Hollow Road. The environmental impacts from transport of radioactive materials are presented in Chapter 5, Sections 5.2.11, 5.3.11, and 5.4.11, which are supported by Appendix J. Bounding transportation accidents are presented in Chapter 5, Section 5.5, which is supported by Appendix D and Appendix J. The releases of radioactive and chemical materials from

*spills are bounded by these analyses. For information regarding terrorism, see Comment Response 30.01.*

- 20.05** Commentor expressed concern regarding the possibility of replacing Transuranic Package Transporter (TRUPACT)-II containers with TRUPACT-III containers to transport waste. If TRUPACT-III containers are used, analysis should be included in Appendix J. Commentors stated that crash testing should be performed on TRUPACT containers. A report by the Environmental Evaluation Group should be used in determining safe packaging for transport as well as addressing concerns from transport. Commentors requested that DOE provide a description of pipe overpacks and expressed concern regarding NNSA developing capability to load TRU waste into pipe overpacks in the Superblock. The overpacks would allow higher actinide loading in each drum, up to 80 plutonium-equivalent curies per drum, and up to 200 fissile-gram equivalents. Commentors believe DOE should not ship waste using single walled containers.

**Response:** *The proposed TRUPACT-III shipping package would be a Type B container as defined by DOT and the NRC. Accordingly, it will be required to meet the same stringent safety specifications as for the TRUPACT-II. Should NRC certify this package and should DOE use it, the package would only be used under conditions consistent with its certification and safety analysis report. NNSA has not evaluated its use, and prior to the certification of the package, cannot state whether any LLNL TRU waste would be shipped in a TRUPACT-III. According to the DOE press release cited in the comment, the TRUPACT-III is expected to reduce the number of trips and the dose from handling packages.*

*The TRU waste transportation accident analysis in the LLNL SW/SPEIS was performed under the assumption that a TRUPACT-II would be used. Given that the TRUPACT-III is also a Type B container, it is unlikely that the analytical results would change should a TRUPACT-III container be used. Should DOE adopt the TRUPACT-III, DOE will ensure that its use remains within the safety envelop of previous analyses for the TRUPACT-II. In addition, the Final LLNL SW/SPEIS provides updated information on TRU waste shipments in Appendix J.*

*The latest NRC Certification of Compliance for the TRUPACT-II (#9218) permits up to 14 S100 or S200 pipe overpacks in the TRUPACT-II, each overpack contained in a 55-gallon drum. The certification was issued July 3, 2003. DOE uses TRUPACT-II containers throughout the DOE complex for shipment of TRU waste to the WIPP and would schedule TRUPACT-II containers should the shipments described in Section 3.3.15 occur. A description of the pipe overpack can be found at the WIPP website: <http://www.wipp.ws/fctshts/TRUwastecontainers.pdf>.*

## **21 UTILITIES AND ENERGY**

- 21.01** Commentor questioned why the issue of energy consumption is not considered in the LLNL SW/SPEIS. The cumulative impacts to the Livermore area and Alameda County need to be assessed.

**Response:** *Energy (e.g., fuel and electricity) consumption associated with each alternative is evaluated in Chapter 5, Sections 5.2.12, 5.3.12, and 5.4.12 of the LLNL SW/SPEIS. The assessment includes impacts associated with the Livermore Site and Site 300, as well as, cumulative impacts to the Livermore area and Alameda and San Joaquin counties. Mitigation measures are addressed in Chapter 5, Section 5.6.13.*

## 22 MATERIALS AND WASTE MANAGEMENT

**22.01** Some commentors requested that the LLNL SW/SPEIS address the increased risk of accidental releases from the transport of nuclear materials. Commentor stated that the LLNL SW/SPEIS should discuss the WIPP in further detail: What type of facility is it and where is it located? How will the WIPP decontaminate, dispose, and transport the waste? Will waste be sent directly to WIPP or held at an interim facility? Commentor questioned why the WIPP Mobile Vendor facility and the shipping contractor are categorically excluded from NEPA review given that approximately 1,000 drums of TRU and mixed TRU will be shipped to WIPP. Commentor requested a copy of a document that discusses TRU waste at LLNL.

Commentor stated that the LLNL SW/SPEIS should provide precise estimates of the number of drums that will be shipped to WIPP over the next twenty years. The LLNL SW/SPEIS should also provide an estimate of the number of highway route control quantity shipments projected from LLNL to WIPP.

**Response:** *Bounding transportation accidents are presented in Section 5.5, which is supported by Appendix D and Appendix J. The presentation provides probabilities of occurrence where they are available. Doses to truck drivers are carefully controlled and limited under the controlling radiation protection program in accordance with DOT and DOE regulations. Health and safety impacts to workers are discussed in Sections 5.2.14, 5.3.14, and 5.4.14.*

*Current plans are that transuranic waste drums at LLNL would be shipped directly to WIPP. WIPP is located 26 miles east of Carlsbad in southern New Mexico, and its operations are not within the scope of the LLNL SW/SPEIS. WIPP's operation and the transportation of waste to it was evaluated in the Waste Isolation Pilot Plant Final Supplemental Environmental Impact Statement (DOE 1997e) and in the Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive Waste and Hazardous Waste (DOE 1997f). Appendix J analyzes annual transportation of waste shipments to WIPP, including the number of shipments.*

*DOE concluded that the mobile characterization equipment used to prepare and to ship approximately 1,000 drums of TRU and mixed TRU waste to WIPP would have no individually or cumulatively significant effect on the human environment. The activity is primarily characterization with some limited repackaging under negative pressure conditions. DOE determined that this facility was categorically excluded from further NEPA review based on 10 CFR Part 1021 Appendix B to subpart D, categorical*

*exclusion B.6.6, which states that modification of an existing operation for packaging and repackaging waste can be categorically excluded (DOE 2003g). The shipment of approximately 700 drums of legacy TRU waste from LLNL to WIPP has been completed.*

- 22.02** Commentor stated that increases in waste generation will further contaminate air, water, and soil at Livermore Site and Site 300. An analysis needs to be performed in the LLNL SW/SPEIS of the environmental impact attributed to the increased allowable amounts of radiological and hazardous waste. The LLNL SW/SPEIS should also discuss waste disposal, storage, and continuing increases of material usage rates after a 10-year period. Commentors requested that DOE disclose information concerning the quantity and potential usage of lithium hydride at Site 300. Some commentors expressed concern regarding LLNL's waste disposal plan, such as disposition pathways for nuclear wastes and D&D wastes. The commentor requested that the LLNL SW/SPEIS discuss occupational protection of workers. Production of waste should not be increased until it is assured that waste will not further pollute Site 300, harm workers, or cause an increase in risk to the public. Commentors stated that LLNL is not licensed as a hazardous waste disposal facility.

Commentors stated that the LLNL SW/SPEIS failed to consider the impacts that waste production would inevitably have at offsite disposal locations and transportation routes. Commentor questioned what procedures would be used to reduce or maintain current waste stream levels. If waste stream levels increase, what NEPA process will be used to address the environmental impacts of such increases?

**Response:** *As discussed in Chapter 4, Section 4.15.2.1, LLNL manages generated waste in accordance with all applicable Federal, state, and local laws and regulations to minimize potential impacts on air, water, and soil. Depending upon the alternative and the specific waste type, waste generation could increase or decrease in the future when compared to the existing baseline. The environmental, health, and safety impacts associated with waste generation and management are presented in Chapter 5 of the LLNL SW/SPEIS. The waste generation levels established for the Proposed Action are expected to reasonably bound any activities at the LLNL through the foreseeable future. All wastes expected to be generated at LLNL have established disposition paths. Waste minimization and pollution prevention is discussed in Appendix O. Appendices A and D discuss lithium hydride at Site 300. Refer to Comment Response 31.02 for information pertaining to the scope and timeframe of this document.*

- 22.03** Commentor stated that the proposed changes in administrative limits and new construction would require modification of existing facilities' permits, to allow different types of waste to be stored and treated. The LLNL SW/SPEIS should identify the modifications where known, and if not known, provide the reasoning for establishing estimates of Class 1, 2, or 3 permit modifications in Appendix B. Commentor stated that the title of the "special initial study" should be changed to "initial study." An environmental impact analysis of these chemicals should be completed based on the new permits.

**Response:** *Permit classifications and their numbers cited in the comment come from Table B.3–2. Appendix B, Section B.3 provides considerable detail on all the activities that would occur under the No Action, Proposed Action, and Reduced Operation alternatives. Many of the activities discussed in this section require permit applications/modifications; however, not all are discussed in terms of permit classifications. The numbers of each type are presented in Table B.3–2 as a summary in order to provide an opportunity to compare the various alternatives. Table B.3–3 provides another summary viewpoint of permit actions under the alternatives. Tables B.3.1–1, B.3.2–1, and B.3.3–1 indicate types of activities that would constitute Class 1, 2, or 3 actions under each alternative. The footnotes direct the reader to 40 CFR Part 270 for more detailed information on classification definitions. The LLNL SW/SPEIS assesses the environmental impacts of activities at LLNL, which includes the use of chemicals and the required permits. The LLNL SW/SPEIS analyzes the increased storage or processing of waste for which DOE/NNSA would have to obtain permits or permit modifications from the Department of Toxic Substances Control (DTSC). These permits would include storage of waste and the use of chemicals needed to process waste. The discussion in Appendix B describing the permitting level (Class 1, 2, or 3) is based on NNSA’s experience with the permitting process; however, the final classification is based on DTSC approval.*

*Appendix B of the LLNL SW/SPEIS has been changed to reflect the change of the title from “special initial study” to “initial study.”*

- 22.04** Commentors expressed opposition to the current activity of recycling and releasing radioactive material under DOE Order 5400.5.

**Response:** *The Secretary of Energy has halted recycling and free-release of radioactive metals, pending completion of a programmatic EIS on this subject.*

- 22.05** Commentor stated that DOE provided quantities of TRU waste in Table B.3–1 that are inconsistent with levels generated by LLNL. Regarding Table B.3–2, an explanation should be given as to why TRU waste generation is less for the Proposed Action than for the No Action Alternative.

**Response:** *The Final LLNL SW/SPEIS provides updated and corrected information on waste volumes in Tables B.3–1 and B.3–2. Based on the new information, the TRU waste generation for the Proposed Action is no longer less than the No Action Alternative.*

- 22.06** Commentor stated that additional information should be added regarding disposition of waste, waste composition, quantity of waste, method of transportation, discharge location and spill prevention plans, and soil and groundwater contingency plans. The LLNL SW/SPEIS needs to include information regarding discharge of waste from the EMPC and the HEDC.

**Response:** *The LLNL SW/SPEIS assesses disposition of waste, waste composition, quantity of waste, method of transportation and discharge locations for LLNL in*

*Chapters 4 and 5, as well as Appendix B. This analysis includes waste generated from EMPC and the HEDC. EMPC and the HEDC are replacement facilities as described in Appendix A, Section A.3.4. The operation of these facilities would have impacts similar to those that they replace. Therefore, the waste from these facilities is within the Proposed Action totals. Spill prevention plans and soil and groundwater contingency plans are developed as necessary in accordance with applicable laws and regulations.*

- 22.07** Commentor stated that Sections A.2.4.18, A.3.3.7, and A.3.4.3 do not discuss the storage and disposal of D&D materials. DOE needs to further discuss potential steps for storing and disposing of such contaminated materials. Commentor questioned why Section B.4.15.2 states that additional review may be required, when this should be occurring now, at the project proposal stage. Commentor stated the closure of Building 419 should be discussed in the LLNL SW/SPEIS; additionally, post closure care should be addressed if clean closure cannot be achieved.

**Response:** *In Appendix A, the volumes of D&D debris discussed in the cited sections are presented in Tables A.2.3–2 and A.3.3–2. This combined waste volume, and its storage and disposal, is addressed in Appendix B, Sections B.5.1.15, B.5.2.15, and B.5.3.15. Appendix B, Section B.4.15.2 acknowledges that if the waste volumes are significantly larger than expected, then additional NEPA review would be necessary. Appendix A, Table A.2.3–2 includes information concerning D&D of Building 419.*

## **23 HUMAN HEALTH AND SAFETY**

- 23.01** Commentor expressed concern regarding the historical and future releases of radioactive materials into the surrounding community, which is densely populated. One commentor specifically stated that significant amounts of plutonium have been found at Big Trees Park near the Livermore Site. One commentor specifically asserted that the LLNL SW/SPEIS inappropriately isolates its analysis of impacts from history. The LLNL SW/SPEIS should contain analysis of historical plutonium releases at all DOE facilities, especially with the Proposed Action to manufacture prototype plutonium pits. Commentor contended that radioactive release figures are low. Radiation toxicity levels have been increasing in the Livermore area for decades. DOE should conduct a rigorous review of the plutonium facility and recommend significant design upgrades. The LLNL SW/SPEIS should provide the cumulative and long-term effects of such releases from proposed facilities. Also, the LLNL SW/SPEIS needs to provide proposed mitigation measures to minimize any adverse impacts.

Commentors indicated that most of the health impacts to the public from LLNL operations are from accidents and recommended that DOE/NNSA redo the Draft LLNL SW/SPEIS in order to produce a credible assessment of health impacts.

Commentors questioned impacts to children.

**Response:** *Historical impacts in terms of dose from all radioactive releases (including plutonium) for the period 1998-2002 are described in LLNL SW/SPEIS in Chapter 4,*

*Section 4.10.5. As shown in this section, impacts are far less than regulatory limits and background radiation impacts. Impacts from earlier years, also far less than regulatory limits, can be found in documents such as Site Annual Environmental Reports and NESHAPs Annual Reports. The LLNL SW/SPEIS presents the long-term direct, indirect, and cumulative impacts to human health and the environment for the Proposed Action from future releases of radioactive materials in Chapter 5, Section 5.3.14. Chapter 4, Figure 4.10.5–1 shows that tritium releases have significantly decreased over the past twenty years. Chapter 4, Table 4.10.5–2 shows the dose to the MEI and the population from LLNL releases between 1998-2002.*

*With respect to plutonium found in Big Trees Park, plutonium was discovered at higher-than-expected concentrations in Big Trees Park in 1993 during an EPA check of background plutonium values in the vicinity of LLNL. In 1995, LLNL in collaboration with the EPA, state regulators, and the public, collected additional soil samples from Big Trees Park to verify the 1993 finding and evaluate any potential hazards to the public. After sampling, the EPA and state regulators concluded that the plutonium in soil at Big Trees Park was below the residential preliminary remediation goal (PRG; 2.5 picocuries/gram), presented no health hazard, and required no further action. This information is detailed in the Livermore Big Trees Park: 1998 Summary Results, August 13, 1999.*

*The LLNL SW/SPEIS evaluates the impacts to the public from normal operations as well as accidental releases. NNSA's evaluation was performed in accordance with current regulations and requirements and uses validated data and conservative assumptions to perform the analysis provided in the LLNL SW/SPEIS.*

*LLNL considers and implements mitigation to reduce radioactive and hazardous releases through a number of programs. The LLNL Integrated Safety Management System integrates environmental, safety and health protection to the public, workers and environment into management and work practices. The LLNL Pollution Prevention Program is designed to minimize pollutant releases to all environmental media from all aspects of the site's operations. New processes and experiments are reviewed to consider possibilities from mitigation actions such as chemical substitutions, process changes and material recycling. New projects are designed with the goal of minimizing or mitigating potential environmental impacts through project modifications at the design stage. The Site Annual Environmental Reports, Section 5.6, and Appendix C of this LLNL SW/SPEIS discuss these mitigation programs further.*

*For information regarding cancer rates in children, see Comment Response 25.05.*

- 23.02** Commentor expressed concern regarding adverse impacts to human health and suggested that the LLNL SW/SPEIS consider and report all types of morbidity effects of the facility. DOE should look at adverse biological effects from even the smallest radioactive emission and incorporate precautionary principles. Commentors questioned what time frame and operation level was used to determine the LCFs. Are the doses

calculated at maximum dose rates for each operation at the lab? A commentor questioned if DOE underestimated cancer rate numbers.

DOE should consider the cumulative impacts (i.e., three power plants in the Tracy area) of additional cancer rates and other illnesses on a vulnerable population. The LLNL SW/SPEIS should discuss the elevated rates of malignant melanoma in the Livermore area. Commentor stated that there is a significant increase in birth defects among the offspring of LLNL employees. LLNL puts their workers at risk of cancer. Some commentors expressed concern regarding the effects of tritiated water on living cells, specifically those of the embryo or fetus. Also, tritium radiation can interfere with the human master-code mechanism for DNA and cell membrane systems. Commentors suggested that since biological and chemical hazards exist on and near the facility, an aggregate cancer study is needed. A commentor suggested the LLNL SW/SPEIS must define mitigation measures to reduce the risk of radioactive and hazardous releases to the worker and community.

Regarding Table 5.3.14.1–1 and similar tables, are the latent cancer fatalities given by year, 10 years or by the life of the project? If the life of the project, please state the assumption as to life expectancy of the project. Also, are the data in the table stated as an annual dose at maximum operations level? Are the doses calculated at maximum dose rates for each operation at the lab?

A commentor stated that the projected levels of tritium release are unacceptable. The LLNL SW/SPEIS should define the level of projected tritium release. A commentor requested that DOE consider the long-term environmental and human costs associated with this action.

**Response:** *Appendix C, Section C.4.2.3 identifies the risk of any health detriment from exposure to radiation, including nonfatal cancers and genetic effects, to the site-wide MEI at both Livermore Site and Site 300. Section C.3.3 describes the health risk estimators for each of these effects. Adverse effects from even the smallest radioactive emissions are included in the LLNL SW/SPEIS because of the use of these linear health risk estimators. Mitigation measures are implemented through LLNL operating procedures.*

*Generally, LCFs are presented in the LLNL SW/SPEIS as the lifetime risk of a LCF to an exposed individual as a result of an annual exposure. Tabular examples of LCFs presented in this way are in Appendix C, Tables C.3.3–1 and C.4.2.3–1. The operation levels in these tables are those associated with each of the action alternatives. Worker doses are also generally expressed as annual cumulative exposures (e.g., Table 4.16.2.2–1). Worker doses include exposure at maximum dose rates experienced by site workers.*

*There are a number of power plant projects in various stages of review before the California Energy Commission. The Commission's facility certification process carefully examines public health and safety, environmental impacts and engineering aspects of*

*proposed power plants, and stringent controls are required to mitigate air pollutant emissions and associated health risks. In the Commission's findings regarding the San Joaquin Valley Energy Center (SJVEC) Project, one of the larger regional projects (total generating capacity would be 1,087 megawatts to be sited in Fresno County), the Commission found that the potential risk of cancer from SJVEC's emissions during construction and operational activities would be insignificant, and that the project will not result in any significant cumulative cancer or chronic noncancer health impacts. Two projects sited in San Joaquin County are considerably smaller, with total combined generating capacity about 25 percent of the SJVEC. The cumulative impact of these projects, together with impacts of proposed activities at Site 300 would not significantly contribute to additional cancer rates and other illnesses on a vulnerable population.*

*Melanoma rates were determined to be elevated for the study period 1960–1991 (California Department of Health Services 1995). However, in a review of Health Studies performed by the California Department of Health Services in cooperation with the Agency for Toxic Substances and Disease Registry, it was determined that more recently, cancer rates among Livermore residents have been found to be similar to the Bay Area as a whole. The number of melanoma cases occurring in a census tract bordering LLNL was greater than expected, but statistically within the range that could have occurred by chance.*

*This same study found that the overall rate of birth defects was very similar to the statewide total (2.5 per 100 live births in Livermore compared to 2.9 per 100 across the state) and that the numbers of specific birth defects were similar to or lower than statewide rates, and the number of other major birth defects was not significantly greater than expected in Livermore (California Department of Health Services 2003).*

*The effects of tritiated water on the embryo or fetus, and on human DNA, are considered in the LLNL SW/SPEIS (see Appendix C, Section C.4.2 for more detailed discussion). Such effects are not expected at the low exposure levels experienced at and in the vicinity of LLNL.*

- 23.03** Commentors expressed concern regarding radioactive and hazardous releases to LLNL workers. Commentor stated that human damage is calculated in terms of LCFs, but other morbidity consequences are ignored. Commentor suggested that the LLNL SW/SPEIS report all types of morbidity effects of the facility under all alternatives.

Commentors questioned whether the HEPA filters on the gloveboxes in Building 332 remain in ill-fitting housings. If they have been changed, please indicate when. How old is the oldest HEPA filter currently in use?

**Response:** *Nonradioactive health risks, such as beryllium disease and occupational injuries are addressed in Chapter 4, Section 4.16.1 and Chapter 5, Section 5.2.14.1. Calculation of radioactive health risks in terms of LCFs is reasonable for NEPA analysis. Additional information is provided in Comment Response 25.05.*

*The HEPA filters on the gloveboxes in Building 332 are not in ill-fitting housings. In accordance with DOE requirements, the LLNL HEPA filters are maintained in safe working order and replaced in accordance with LLNL procedure (UCRL-AR-133354-Rev.2).*

- 23.04** Commentor stated that the LLNL SW/SPEIS should address workers' compensation, should an employee fall ill or pass away from a work-related event. Several commentors questioned whether LLNL employees (both past and present) would be compensated for adverse human health effects.

**Response:** *A discussion of employee benefits programs (worker or company funded), e.g., workers compensation, company supplied life insurance, supplemental life insurance, etc., in effect to cover worker illnesses or death is outside of the scope of this analysis. Although the LLNL SW/SPEIS does not discuss workers' compensation acts specifically, DOE monitors and analyzes the potential health effects of its workers.*

*The Energy Employees Occupational Illness Compensation Program provides benefits authorized by the Energy Employees Occupational Illness Compensation Program Act (EEOICPA or Act). The Department of Labor's Office of Workers' Compensation Programs is responsible for adjudicating and administering claims filed by employees or former employee or certain qualified survivors of the Act. For more information regarding this program, the commentors are directed to the program web site (<http://www.dol.gov/esa/regs/compliance/owcp/eeoicp/main.htm>).*

- 23.05** Commentor stated that a recent study of negative health impacts in the Livermore area criticized the Agency for Toxic Substances and Disease Registry assessment of LLNL for not using models to accurately predict radioactive doses. Because the study found the assessment to be inadequate, DOE must provide a credible assessment of health impacts on workers and the public.

**Response:** *The purpose of the LLNL SW/SPEIS is to conduct a credible assessment of the health impacts to the workers and the public. This is done using a broad range of available information and models developed by regulatory agencies and data drawn from experience. In the case of existing operations, the information on worker dose is based on exposure records. In the case of new operations (e.g., NIF), worker doses are based on models, which simulate worker exposure for the operations to be performed. Health impacts to the public are based on mathematical models that incorporate operation release mechanisms, transport of the releases through the environment, and human exposure pathways (see Chapter 5, Sections 5.1.8 and 5.1.14).*

## **24 SITE CONTAMINATION AND REMEDIATION**

- 24.01** Commentor expressed concern regarding the legacy and proposed increase of hazardous waste at the Livermore Site. Increased contamination would contribute to the unaddressed and inadequate cleanup of all DOE sites. Specifically, commentors were concerned about the shipment to and the storage of legacy waste at Hanford.

**Response:** *Stored waste would be contained in accordance with regulatory standards and would not result in contamination of the environment. Accidental releases would be subject to rapid cleanup under existing spill response plans and would not contribute to existing contamination at LLNL. Procedures detail the safe practices that are to be used in the handling of waste to prevent exposure of workers and contamination of the environment. Legacy waste at Hanford and the cleanup of all DOE sites are beyond the scope of the LLNL SW/SPEIS. LLNL remediation activities are discussed in detail in Chapter 4, Section 4.17.*

- 24.02** Commentor expressed concern regarding the legacy and proposed increase of hazardous waste at Site 300. Commentor stated that although remediation efforts continue, the LLNL SW/SPEIS does not discuss the fact that groundwater contamination at Site 300 continues to be above drinking water standards, regardless of remediation efforts. Commentor stated that no pristine areas should be contaminated. Safe practices should be top priority and no standards, regulations, or permits should be modified to allow increased levels of contaminants. Please describe if and how increases in contaminants to air and soil may take place and risks involved. Do not execute a plan that increases air and ground pollution. Commentors expressed concern regarding a westward trending radioactive groundwater plume from the Livermore Site. Commentors stated that the EPA has designated LLNL as a Superfund site.

**Response:** *Chapter 4.11.3 of the LLNL SW/SPEIS provides detailed descriptions of groundwater and the hydrologic conditions at both the Livermore Site and Site 300 including information about occurrence and flow of groundwater, water quality, and the types and concentrations of groundwater contamination. Chapter 4.11.3.4 discusses the potential mobility of tritiated groundwater and also indicates that natural decay has resulted in concentrations below drinking water standards. The LLNL SW/SPEIS also presents a detailed description of groundwater contamination, concentration trends, and status of remediation activities that are being conducted in accordance with CERCLA at both the Livermore Site and Site 300 in Chapter 4, Section 4.17. As discussed in Appendix C, LLNL implements programs to provide safe working conditions for employees and to limit exposures of the general public to hazardous and radioactive materials. These programs are conducted in accordance with regulatory requirements and include implementation of administrative and engineered controls to minimize potential releases as well as surveillance monitoring of the environment and reporting of exposure assessments. With respect to potential releases of hazardous and radioactive materials from ongoing operations, please see Comment Response 24.01. DOE acknowledges that LLNL has been designated as a Superfund site and is implementing remediation as required by state and Federal regulations.*

- 24.03** Commentor stated that the LLNL SW/SPEIS needs to discuss CERCLA issues and remediation in greater detail. Existing contamination should be cleaned up before expanding program activities. Potential “trade offs” that may lead to cleanup budget shortfalls must be discussed in the LLNL SW/SPEIS.

**Response:** Detailed information on CERCLA issues and remediation is found in the Site Annual Environmental Reports for LLNL. Section 4.17 of the LLNL SW/SPEIS summarizes information from the most recent of these reports. Program activities are not anticipated to have any effect on the rate of cleanup of contaminated areas. The installation and operation of remediation systems are largely governed by agreements with regulatory entities. Cost and budget concerns will be addressed in the ROD as appropriate.

- 24.04** Commentors expressed concern regarding LLNL’s environmental monitoring program. Commentors expressed concern about recent offsite sampling by The RadioActivist Campaign (TRAC) that found elevated levels of four radionuclides just outside the Livermore Site boundary.

**Response:** LLNL’s environmental monitoring is done in accordance with Federal, state, and local requirements. The levels of the four radionuclides are well within fallout background that is well understood by the LLNL. LLNL’s environmental monitoring program collects thousands of samples annually to determine compliance with regulatory standards. According to information obtained from TRAC, 12 samples were collected by the organization in December 2003 and analyzed for various radionuclides. Samples were collected from a variety of media including grass, sediment, leaves, and surface water from Arroyo Seco. However, all results were compared to Federal drinking water standards for community water systems (40 CFR Part 141) that are calculated to be protective of human health based on repeated human exposure to contaminants through intake of water. Radionuclide activity exceeded the standard for only one radionuclide in one sample, strontium-90, in a grass sample collected approximately three miles west-northwest of the Livermore Site. The result reported in the analysis of this sample is  $190 \pm 160$  picocuries wet, which TRAC admits is “a low level of confidence” and “invites follow-up sampling.” Note that strontium-90 can be present in soils throughout the United States as a result of fallout from aboveground testing of nuclear weapons from 1945 to 1980. TRAC conducted a second sampling in May 2004, collecting a similar number of samples, and obtained one data point above their detection limit, which was also consistent with weapons test fallout.

- 24.05** Commentor wants DOE to explain its assertion in Section 5.3.15.3 that there is no significant difference in potential for contamination between the Proposed Action and No Action alternatives. Also, the LLNL SW/SPEIS does not take into account adverse effects onsite, should contamination arise from D&D activities.

**Response:** Program activities are not anticipated to have any effect on the rate of cleanup of contaminated areas. The installation and operation of remediation systems are largely governed by agreements with regulatory entities. The potential for accidental releases would increase because of greater site activity under the Proposed Action, but these releases would be subject to rapid cleanup under existing spill prevention, control, and countermeasures (SPCC) plans and would not be expected to contribute to existing contamination at LLNL. Any accidental contamination resulting from D&D activities

would also be subject to rapid cleanup under existing SPCC plans; no adverse effects would be expected.

## 25 ACCIDENTS

**25.01** Commentor questioned the adequacy of the accident analysis. By increasing plutonium limits, the risk of LCFs during an accident would increase to 288 percent of the present risk to plant workers and general public in close proximity. Even the lesser amount of plutonium used in the No Action Alternative would reach criticality with horrific consequences. Commentor expressed concern regarding the risk earthquakes pose to LLNL buildings containing bio-agents, plutonium, tritium, and other radioactive materials. Potential release of such contaminants could endanger the area for generations.

Commentor stated that the bounding accident scenario for Building 332 is the unfiltered fire in one room, with a MAR of 60 kilograms of plutonium. However, the administrative levels allow 60 kilograms in each of the two rooms. The detailed analysis of a plane crash does not provide MAR, but should contain 120 kilograms of plutonium, with a disturbance in two rooms. If this is correct, would the plane crash become the bounding scenario?

Commentor requested that DOE conduct an analysis of a hydrogen deflagration accident. It has nearly five times the source term as the unfiltered fire, and greater estimated probability. This would point to it as being the bounding accident for Building 332.

Commentor stated that emergency diesel generators (EDGs) in the 1990s failed routine tests numerous times. Accident scenarios should not presume that EDGs will be working, both to run the ventilation system and other emergency equipment. A credible scenario of an unfiltered fire with no power should be analyzed.

Commentor stated that during a fire, HEPA filters and seals are prone to failure because the filter is made of paper and would lose its filtering capability when wet (from fire suppression) and would be severely damaged by high temperatures.

Commentor stated that risk of a fire in Building 334 involving highly enriched uranium should be analyzed in detail.

Commentor requested a more detailed assessment of drum arrays in Building 625, specifically concerning the maximum curie limits for drums.

**Response:** *As stated in Appendix D, Section D.1.1, the accident scenarios have been developed to reflect the broad range of accidents that might occur at LLNL. The scenarios are specific to particular buildings and operations. The wide range of postulated accidents characterizes the range of accident impacts associated with the operation of LLNL. Bounding scenarios were developed for specific hazards such as radioactive material, toxic chemicals or high explosives for an operation in a building.*

*An accident analysis of biological hazards is presented in Appendix D, Section D.5. The LLNL SW/SPEIS accident analysis was conducted in accordance with applicable guidance, requirements and regulations as appropriate.*

*With the removal of ITP from the Proposed Action, the MAR is now 40 kilograms of plutonium (compared to 60 kilograms in the Draft LLNL SW/SPEIS). The Proposed Action bounding accident scenario for Building 332 remains the unfiltered fire in one room with lesser consequences as described in Section D.2.4.9.2 of the LLNL SW/SPEIS. A simultaneous fire in two rooms, each having a MAR of 40 kilograms of plutonium, has a frequency of occurrence conservatively estimated to be much less than  $1 \times 10^{-6}$  and therefore is considered not reasonably foreseeable.*

*The possibility of an inadvertent criticality in Building 332 was assessed in the LLNL SW/SPEIS. As noted in Section D.2.5 of the LLNL SW/SPEIS, the bounding case radiological accident for involved workers is a plutonium criticality for a powder, slurry, or solution system in a workstation in Building 332. Severe worker exposures could occur inside the facility as a result of a criticality, due primarily to the effects of prompt radiation. A criticality would be detected by the criticality alarm system, and an evacuation alarm would sound. All personnel would immediately evacuate the building. The accident would have minimal offsite consequences when compared to other accidents analyzed.*

*The potential offsite impacts of a large earthquake are described in Section D.6.2 of the LLNL SW/SPEIS. As described in Section D.6.2, taking the conservative approach of summing the doses for each of the individual facilities results in a total radiation dose at the site boundary under median meteorological conditions of 1.03 rem. Using the dose-to-risk conversion factor of  $6 \times 10^{-4}$  per person-rem, the MEI has a probability of  $6.02 \times 10^{-4}$  (or one chance in 1,620) of the development of a fatal cancer. The collective radiation dose to the approximately 6,900,000 people living within 50 miles of LLNL under the multiple-building release scenario for median meteorology was calculated to be 417 person-rem. The collective population dose is estimated to result in an additional 0.24 LCF to this population.*

*Under unfavorable meteorological conditions, the radiation dose to the MEI for the multiple building release scenario is 20.4 rem. Using the dose-to-risk conversion factor of  $6 \times 10^{-4}$  per person-rem, the MEI has a probability of 0.011 (or 1 chance in 95) of the development of a fatal cancer. The collective radiation dose to the approximately 6,900,000 people living within 50 miles of LLNL under the multiple-building release scenario for unfavorable meteorological conditions was calculated to be 4,320 person-rem. The collective population dose is estimated to result in 1.76 LCFs to this population.*

*As described in Section D.2.3 of the LLNL SW/SPEIS, the aircraft crash probability for LLNL facilities is dominated by general aviation, which represents approximately 99 percent of the total probability reflected in Table D.2.3–1 of the LLNL SW/SPEIS. General aviation operations at the Livermore Municipal Airport represent approximately 93 percent of the total probability reflected in Table D.2.3–1. Over 95 percent of the*

Livermore Municipal Airport operations are represented by the general aviation subcategories of single engine piston, multi-engine aircraft, and helicopter aircraft. A similar distribution of airframes was assumed for the general aviation data for Tracy Municipal, Byron, and in-flight operations. Therefore, the consequences of a large single-engine piston aircraft impacting facilities at the Livermore Site bound the reasonably foreseeable accidents into LLNL facilities. This single-engine piston aircraft is not of sufficient size to impact more than one room of Building 332 simultaneously. Therefore, the amount of material contained in a single room of Building 332 is the appropriate MAR for this accident scenario.

In the LLNL SW/SPEIS, NNSA evaluated two hydrogen deflagration scenarios: filtered and unfiltered. As shown in, Table D.2.4–1, for the filtered scenario, the source term is  $9.0 \times 10^{-3}$  grams fuel-grade plutonium for the No Action Alternative and 0.027 gram fuel-grade plutonium for the Proposed Action. For the unfiltered scenario, the frequency is much lower than the level considered “beyond reasonably foreseeable” and thus not appropriate for analysis in an EIS.

The facility accident scenarios presented in the LLNL SW/SPEIS do include scenarios where the room exhaust system is unavailable because of an independent, random loss of offsite and emergency power to the building. For example, in Building 332, the unavailability of the room exhaust system for a 10-hour duration is estimated as being  $1.1 \times 10^{-4}$ . It should be noted that, contrary to the commentor’s assertion, the bounding accident for Building 332 for the Proposed Action is an Evaluation Basis Room Fire (unfiltered release), where the ventilation system is assumed to be inoperable (see Section D.2.4.9.2). The failure of the HEPA filters was not included in the Evaluation Basis Room Fire scenario because their failure during a fire would make the scenario a not reasonably foreseeable event. Should any burning materials get into the ventilation system before the dampers operate, the HEPA filters are protected by deluge sprays and demisters to cool and de-water the air reaching them.

As shown in Table D.2.4–1, an unmitigated fire in Building 334 involving highly-enriched uranium was evaluated in the LLNL SW/SPEIS. This accident scenario resulted in a release to the environment of 100 grams of highly-enriched uranium. NNSA performed consequence assessment calculation for this release (as well as for the other accident scenarios shown in Table D.2.4–1), and the calculated consequences of this scenario were well below those of the Uncontrolled Oxidation of Plutonium at Elevated Temperatures scenario for Building 334. Therefore, this latter scenario is the bounding radiological accident for this building and is further described in Appendix D, Section D.2.4.10.

As noted in Section D.2.4.11 of the LLNL SW/SPEIS, NNSA conducted a detailed assessment of the risks of storage of transuranic waste drums of in Building 625. It is anticipated that drums containing up to 60 plutonium-equivalent curies would be stored in Building 625. In this accident analysis, the maximum curie limit under the Proposed Action is assumed to be equivalent to an array of drums where one drum contains 60 plutonium-equivalent curies and the other surrounding drums contain 12 plutonium-

*equivalent curies. The shipments of legacy TRU waste, including Building 625, from LLNL to WIPP have been completed. It is projected that future waste shipments to WIPP will be completed before Building 625 and other LLNL transuranic waste storage facilities are fully loaded. Therefore, the consequences discussed above are associated with what would be considered a maximum peak inventory in Building 625 that would be allowed under the facility's operational procedures, but may never occur. This analysis of this accident included sufficient detail to identify impacts to the involved worker, noninvolved worker, maximally exposed individual, and offsite population.*

- 25.02** Commentor expressed concern regarding potential for chlorine gas release. This could disable security forces and personnel, so that an accident could occur. Explain how operations could be safely shutdown if there was a hazardous leak. In addition, DOE should analyze an accident involving these substances.

Commentor stated that it is not clear whether the actions in Table B.3–3 were considered during the selection process for accident scenarios. In particular, was the storage of hazardous and mixed waste in Building 696R considered in the evaluation of chemical accident scenarios? Table 5.5.2.2–1 and Table D.3.2–1 do not include Building 696R.

Commentor questioned why Section D.3.2.10 states that an accident scenario involving an earthquake release of Freon-22 scenario assumes that drums will not be stacked two high, when the Hazardous Waste Permit for the Livermore Site would allow stacking of 55-gallon drums.

**Response:** *As discussed in Section D.3.2.8 of the LLNL SW/SPEIS, NNSA assessed a postulated release of chlorine from Building 332. A potential cause of such an event could be the failure of various system components. The potential release paths include pipe ruptures in four different piping sections or leaks from the chlorine cylinder and the two valves in the system. These contributors to the release potential were considered. It was assumed that any leak inside the gas cabinet would be detected and mitigated in time. Unless the gas cylinder valve fails catastrophically, the safety features associated with the toxic-gas installation would allow only a very small release of toxic gas under any abnormal conditions. A more severe release could result if these features, or combinations of these features, failed to function.*

*A source term was developed for the unmitigated release from the apparatus. An unmitigated release of chlorine or hydrogen chloride through a small orifice, 0.18 inch in diameter (corresponding to the internal diameter of the piping used [0.25-inch outer-diameter]) or a small hole in the cylinder, was examined. The source terms for the bounding scenario were developed by assuming that the chlorine gas was released through 0.25-inch outer-diameter tubing directly into the atmosphere. No credit was taken for the flow-restricting device, whose size is much smaller than 0.25 inch. The frequency of this event is  $5.7 \times 10^{-7}$  per year.*

*The gas cabinet is monitored for both chlorine and hydrogen chloride. The delivery line inside the gas cabinet has an excess flow shutoff valve and an emergency shutoff valve*

located near the cylinder head. In the case of a chlorine leak, these features would serve to mitigate the consequences of such an event. It is assumed that any leak occurring inside the gas cabinet could be detected by the chlorine sensor, thereby alerting Control Room personnel, who could provide mitigation of the leak. In addition, emergency procedures in place at LLNL include immediate actions (e.g., terminate the release, limit access by personnel the area downwind of the release, and take shelter) to warn building personnel of the hazard and to prevent workers from exposure to the gas. In addition the Emergency Management Division maintains procedures that provide for notification of the facility managers of all facilities located within 100 meters of Building 332 of any potential release.

No stand-alone chemical inventories would be stored, staged, or handled in Building 696R. Small quantities of hazardous materials (California combined wastes) below reportable quantities (in total) may be found in containers with transuranic waste. Liquid waste would not be stored in Building 696R. Therefore, the potential chemical hazards for this facility would be very low and well bounded by the other facilities listed in Appendix D, Table D.3.2–1.

The first paragraph of Appendix D, Section D.3.2.10 describes how process reagents are stored in this facility, including sulfuric acid, hydrogen peroxide, ferric sulfate, and sodium hydroxide. The assumption that drums of these reagents would not be stacked two-high has been removed, but the results of the accident analysis have not changed, based on the assumption that the buildings can withstand the design-basis earthquake.

- 25.03** Commentor requested that a description of the range of possible impacts should high explosives detonate accidentally. Commentor also questioned why the LLNL SW/SPEIS did not consider accident scenarios initiated by fire at Site 300 facilities.

**Response:** Appendix D, Section D.4 assesses accident scenarios and impacts associated with high explosives. Many accidental detonation scenarios are addressed.

As described in Section D.2.4 of the LLNL SW/SPEIS, NNSA did consider accident scenarios initiated by fire at Site 300 facilities. In fact, as shown in Table D.2.4–1, the bounding radiological accident scenario for the Site 300 Materials Management Facilities is a “Depleted uranium release by fire.” The consequences of this accident scenario are presented in Appendix D, Section D.2.5.

NNSA also assessed the impacts of the postulated release of chemical substances caused by a fire for the Site 300 Materials Management Facilities and the Site 300 Explosive Waste Treatment Facility. The consequences of these chemical accident scenarios are presented in Appendix D, Section D.3.3.

- 25.04** Commentor questioned if the increase in plutonium MAR would have any additional concern with regards to the BSL-3 Facility. Commentor stated that different accident scenarios (e.g., plane crash, accidental needle stick, shoulder fired rocket, earthquakes, vulnerability of HEPA filters) involving the BSL-3 Facility should be evaluated to assess

the risk from release of biological agents, such as anthrax or plague. Commentor stated that due to increased work with biological material in the Proposed Action, there would be a greater effect than the other alternatives and suggested correcting.

Commentor stated that the BSL-3 Facility accident scenario in the LLNL SW/SPEIS is inadequate. The analysis relied on outdated models that were done on a different facility and not even within the DOE. DOE should conduct a programmatic environmental assessment for the expanding biological safety programs at LLNL.

**Response:** *The increase in the plutonium MAR in Building 332 would have no impact on operations at the proposed BSL-3 Facility. If an accident were to occur in Building 332, emergency procedures in place at LLNL include immediate actions (e.g., terminate the release, limit access by personnel the area downwind of the release, and take shelter) to warn building personnel of the hazard and to prevent workers from exposure. As a defense-in-depth, the building emergency procedures provide for notification of the facility managers of all facilities located within 100 meters of Building 332 of any potential release.*

*For purposes of the LLNL SW/SPEIS, NNSA has selected a representative facility accident that has been previously analyzed by the U.S. Army in the Final Programmatic Environmental Impact Statement Biological Defense Research Program (Army 1989). NNSA believes that this accident scenario is comparable to and bounds any potential scenarios associated with the BSL-3 Facility. The BSL-3 Facility is more than 100 meters from Building 332.*

*An EA provides NEPA coverage for the construction and operation of this facility. The EA covered environmental impacts including groundwater. Any comments received in 2002 were addressed in the BSL-3 EA. A FONSI (DOE/EA-1442), dated December 16, 2002, was issued for the BSL-3 Facility at LLNL. Additional information concerning the operation of the BSL-3 Facility at LLNL is included in Comment Response 35.01.*

- 25.05** Commentor urged DOE to formulate a safer plan for an accident at LLNL (specifically involving plutonium or tritium) that could disastrously affect the highly populated Bay Area. If an accident were to occur, how would the area be evacuated? The Hazard Prediction and Assessment Capability (HPAC) model illustrates how widely plutonium could be dispersed and the impacts to nearby residential population centers when plutonium is in proximity to an explosion. The HPAC calculations imply a much larger impact than the accident scenarios discussed in the LLNL SW/SPEIS. The LLNL SW/SPEIS should be rewritten to include HPAC calculations.

Commentor stated that the LLNL SW/SPEIS fails to acknowledge the tremendous uncertainties associated with any of the exposure risks estimated to occur from routine activities or non-routine accidents, especially if such materials enter densely populated communities.

Commentor stated that the production of large amounts of plutonium and its processing and evaporation may entail significant risks that must be evaluated in the context of urban/suburban location of LLNL. A commentor expressed concern regarding future accidental releases into the air, regardless of amount. Another commentor questioned how DOE could propose programs that involve known carcinogens and no disposal pathway; and have a half-life of 24,000 years, in an urban area such as Livermore.

Commentor stated that in addition to latent cancer fatalities, other severe effects would also result, including non-lethal cancers and diseases. The accident analysis does not evaluate the residual risks of disease from an accident. Commentor expressed concern regarding asthma in children and elderly due to air pollution. What are the current rates of asthma in children in Livermore? Are there more cases of asthma in children detected closer LLNL? Do Livermore children have more problems/diseases than children in communities without laboratories?

**Response:** *Plutonium is not produced in Building 332. Processing plutonium using "evaporation" will not occur since AMP and ITP have been canceled. Consequences of accidental radiological releases were determined using the MELCOR Accident Consequence Code System, Version 2 (MACCS2) computer code (Chanin and Young 1997). MACCS2 is a DOE/NRC sponsored computer code that has been widely used in support of probabilistic risk assessments for the nuclear power industry and in support of safety and NEPA documentation for facilities throughout the DOE complex. NNSA believes that the use of this code, as described in Appendix D of the LLNL SW/SPEIS provides an accurate and defensible estimate of the transport of plutonium and other radioactive materials released during the postulated accident scenarios. As described in Appendix D, Section D.2.1 of the LLNL SW/SPEIS, it was conservatively assumed that there would be no evacuation or protection of the surrounding population following an accidental release of radionuclides. While other codes, such as the Hazard Prediction and Assessment Capability (HPAC) model, could have been used to perform the accident analysis, DOE/NNSA decided to use the MACCS2 code because it was specifically designed for calculating radiological atmospheric dispersion and consequences. The HPAC code was developed to assess nuclear, biological, chemical, radiological and high explosive collateral effects.*

*Health effects other than LCFs could result from environmental and occupational exposures to radiation. These include nonfatal cancers among the exposed population and genetic effects in subsequent generations. Previous studies have concluded that these effects are less probable than fatal cancers as consequences of radiation exposure. Dose-to-risk conversion factors for nonfatal cancers and hereditary genetic effects (0.0001 per person-rem and 0.00013 per person-rem, respectively) are substantially lower than those for fatal cancers. This LLNL SW/SPEIS presents estimated effects of radiation only in terms of LCFs because that is the major potential health effect from exposure to radiation. Estimates of nonfatal cancers and hereditary genetic effects can be estimated by multiplying the radiation dose by the appropriate dose-to-risk conversion factors for these effects.*

*NNSA is not aware of any studies demonstrating a link between radiation exposure and asthma. Therefore, incidences of asthma in the offsite population near LLNL are not an appropriate measure of the impacts of postulated LLNL facility accidents. As stated in Chapter 1, Section 1.6.4, an investigation of cancer incidence among LLNL employees did not identify any link between employment at LLNL and increased risk of cancer (Moore et al. 1997). Another study found that cancer rates among children and young adults in the city of Livermore do not differ appreciably from elsewhere in Alameda County (California Department of Health Services 1995). Another study found that birth defect rates in Livermore are similar to the overall rates for the State of California (California Department of Health Services 1996).*

- 25.06** Several commentors stated that the analysis seriously underestimated the consequences of a major accident. The LLNL SW/SPEIS should address more common types of accidents and potential damage caused by each. Commentor recommended that project duration be identified and factored into the project analysis. Commentor questioned why there is no consideration of a purposeful attack. Another commentor questioned why the seismic appendix was withheld from the Summary. Regarding earthquake scenarios, the g-force number in the LLNL SW/SPEIS may underestimate the destruction that may occur at LLNL. Commentor stated that the LLNL SW/SPEIS fails discuss environmental effects in its accident analysis.

Commentor requested additional studies to extent of risks to the offsite population from failure of safety equipment and materials. Commentor stated that raw data on the accidents related to failure frequencies of equipment, and how they have been grouped, and how the specific industrial experience from comparable facilities at the Rocky Flats Plant should be incorporated. An analysis of the “changes in equipment and procedure” need to be outlined in the LLNL SW/SPEIS to evaluate accident frequencies, source terms, and radiation doses. Commentor asked for additional information explaining the derivation of accident frequencies.

Commentor questioned why socioeconomic impacts accident costs (e.g., rebuilding, remediation, property value, lost agricultural capability) were not evaluated in the LLNL SW/SPEIS.

Commentor questioned DOE’s assurance of safety given the history of LLNL’s spills, releases, and leaks. Commentor stated that the LLNL SW/SPEIS does not reflect the historical safety violations or develop mitigation measures to prevent them. Commentors questioned why human error was not factored into release calculations.

The LLNL SW/SPEIS should include inadvertent events data for the past 5 years at the Livermore Site and Site 300.

Commentor asked which prominent scientists on the LLNL staff approved the risk assessments, and if any dissented.

Commentors stated that the LLNL SW/SPEIS did not consider a bounding accident for storage vaults that would pose a measurable risk to workers outside the immediate buildings or to the neighboring community. The LLNL SW/SPEIS must evaluate probabilistic risk assessment for the No Action Alternative. A commentor stated that the LLNL SW/SPEIS should identify the weaknesses that are inherent in risk calculation. Commentor stated that only LCFs are reported in the accident analysis and questioned why other kinds of illnesses that occur from a radiation accident were not included. An accident scenario should include the failure of Building 332 emergency diesel generators. A commentor stated that the consequence of potential radiological and hazardous materials indexed in explosive accidents in Building 327 is not in the LLNL SW/SPEIS.

Commentor asked that the differences between data in the LLNL SW/SPEIS and reference LLNL 2003bg be reconciled.

Commentor requested additional information on the accident analysis for Building 696R. Commentor was concerned about accident frequencies, the possibility of an airplane crash resulting in a criticality, and other less significant accidents.

Commentor requested more detail concerning the assumptions for an array of drums in Building 625.

One commentor asserted that the accident analysis is incomplete because it does not assess the public risk perception and stigma associated with hazardous and radioactive material.

**Response:** *The values used in the LLNL SW/SPEIS accident analysis are based on careful consideration of the material present in the facility, potential initiating events and their probabilities, and potential pathways that material could escape through to reach the environment. These accident scenarios include a wide range of assumptions, including scenarios where human factors (i.e., employee error) initiate or exacerbate the accident. The accident frequencies listed in Appendix D were developed using generally accepted methodologies identified in DOE guidance documents. Facility accidents were identified and analyzed and bounding accidents for the site were developed. No site bounding accident for storage vaults was identified. Chapter 10 of the LLNL SW/SPEIS identifies the preparers of the document and lists their credentials.*

*NNSA focused the accident analysis in the LLNL SW/SPEIS on human health impacts among LLNL workers and the general public near LLNL. Other environmental impacts could also result from the postulated facility accidents, such as loss of farm production, contamination, land usage, and ecological harm. However, these secondary impacts were determined not to be a major discriminator between alternatives, therefore they were not assessed in detail.*

*The consequence of potential radiological and explosive accidents in Building 327 is bounded by the accident analysis in Appendix D.*

*Decontamination and Waste Treatment Facility (DWTF) includes Buildings 693, 693 Annex, 695, 696, and 696R. The preliminary Safety Analysis Report (SAR) for DWTF was not used in the accident analysis. Though the preliminary SAR for DWTF assumes tritium in a single container is 3,000 curies, LLNL currently limits the amount of tritium in a single waste container to 2,000 curies for all waste storage facilities. References LLNL 2002bm and LLNL 2003y were used for analysis of waste management facilities. The operation (including equipment failures) at Building 695 is bounded by the consequences from other facilities and is therefore not analyzed in detail in Appendix D, Section D.2.4.13. The probability of an aircraft accident into facilities analyzed in Appendix D was developed using DOE Standard 3014 “Accident Analysis for Aircraft Crash into Hazardous Facilities.” It is not reasonably foreseeable that an aircraft accident into Building 696R would result in a criticality accident and therefore was not analyzed.*

*The accident analysis in Appendix D was completed by an independent contractor not scientist at LLNL. Data used for the analysis was collected primarily from existing LLNL documents; however, data from other sources was also used. Specifically, reference LLNL 2003bg was used as a basis for the probability (30 percent) that a fire would occur after an aircraft accident. Accident analysis in existing LLNL documents has been completed using various conservative methodologies. A standard methodology for accidents was used for the LLNL SW/SPEIS as described in Appendix D; therefore, the results in the LLNL SW/SPEIS might differ from documents such as reference LLNL 2003bg.*

*The future revisions to the SAR for Building 696R may include increases of container limits for up to 12 curies per container.*

*It is not possible to predict whether intentional attacks would occur at LLNL or at other critical facilities, or the nature of the types of attacks that might be made. Nevertheless, NNSA reevaluated scenarios involving malevolent, terrorist, or intentionally destructive acts at LLNL in an effort to assess potential vulnerabilities and identify improvements to security procedures and response measures in the aftermath of the attacks of September 11, 2001. Security at NNSA and DOE facilities is a critical priority for the Department, and it continues to identify and implement measures designed to defend against and deter attacks at its facilities. In March 2004, DOE's Office of Safeguards and Security Evaluations completed a special department-wide review at LLNL that included performance testing LLNL's Protective Force. LLNL was given a rating of “Effective Performance,” which is the highest one possible.*

*Substantive details of terrorist attack scenarios and security countermeasures are not releasable to the public, since disclosure of this information may be exploited by terrorists to plan attacks.*

*For related information see Comment Responses 25.01 and 25.05.*

*Table 7.4–1 has been expanded to include inadvertent event data for the past 5 years at the Livermore Site and Site 300.*

*The array of drums analyzed in the bounding accident for Building 625 is very conservative and assumes that the facility is loaded to its physical limits with containers of TRU waste as described in Chapter 3, Section 3.3.14. Appendix B contains a projection of TRU waste for all three alternatives.*

*Estimates for the amount of TRU waste were made in either drums or cubic meters in an effort to gather data to be analyzed. The results of the analysis, which includes waste from Building 332 and other facilities is reflected in cubic meters. See Appendix B for more information concerning waste management.*

*There is no cancer risk associated with the transport of biological material. See Comment Response 35.01 for more information concerning the shipment of biological samples to LLNL.*

*Perception-based impacts do not depend on actual physical environmental impacts resulting directly from the proposed project, but rather upon the subjective perceptions of individuals at any given time. Such subjective, psychological factors are not readily translatable into quantifiable impacts. People do not act consistently in accordance with negative perceptions. Also, perceptions may change over time, and perceptions may be affected by a host of other factors that may have nothing to do with the proposed project. Accordingly, any connection between public perception of a risk or stigma associated with hazardous and radioactive material would be uncertain or speculative at best, and therefore would not inform decision making.*

- 25.07** Commentor noted that in the past, the Defense Nuclear Facilities Safety Board (DNFSB) has criticized LLNL operations, and most recently, strongly criticized LLNL's accident analysis. Commentor stated that the LLNL SW/SPEIS should incorporate and address concerns in the DNFSB letters concerning Building 332. The LLNL SW/SPEIS should evaluate if potential modifications of LLNL's facility operations are warranted based on the DNFSB's recent findings and recommendations. Accident scenarios must take into account potential emissions, radiation levels, and dose levels. DOE should recalculate the accident scenarios and consequences used in the LLNL SW/SPEIS. The LLNL SW/SPEIS should describe LLNL's reliance on air monitors, emergency generators, and negative airflow. In this context, DOE should include information concerning the October 2003 plutonium accident that resulted in potential employee exposure because numerous safety features failed simultaneously.

Commentor stated for the bounding accident for Building 332, certain assumptions such as the airborne release fraction (0.0005) and leak path factor (0.05) are determined. A more conservative approach would be to assume a leak path factor between 0.5 and 1, which would double the release. DNFSB criticized this leak path factor calculation, stating it was unrealistic and probably underestimates the extent of a release from unfiltered radioactive material from this facility. Commentor also questioned the

derivation of the airborne release fraction. Commentor stated that the emission release values need to be modified during an event when workers have to leave through an emergency exit.

**Response:** *In October 2003, LLNL submitted a proposed safety basis for Building 332, the Plutonium Facility, to the NNSA Livermore Site Office for approval. The DNFSB has raised issues concerning this proposal. However, the LLNL SW/SPEIS uses the June 26, 2002 safety basis document (LLNL 2002af) approved by the Livermore Site Office and with which the DNFSB is familiar.*

*In the No Action Alternative, Proposed Action, and Reduced Operation Alternative bounding scenarios were developed and analyzed. The values used in the LLNL SW/SPEIS accident analysis are based on careful consideration of the material present in the facility, potential initiating events and their probabilities, and potential pathways that material could escape through to reach the environment.*

- 25.08** Commentor stated that the airplane crash scenario assumes only a small single aircraft would be involved in an accident. The scenario needs to be recalculated to incorporate potential risk involving commercial airliner crashes, assuming a large plane crash may dominate bounding accident scenarios. For accident scenarios, the LLNL SW/SPEIS needs to discuss: 1) derivation of accident frequencies, 2) frequency of airplane crashes, and 3) unfavorable meteorological conditions. A commentor suggested that the analysis scenario be redone to include all major airports over 22 miles away in the Bay Area.

Commentator stated that the aircraft accident is inadequate. The contention that an aircraft crash into a pit manufacturing facility under the proposed accident would result in nothing more than 0.168 LCFs per year is ludicrous.

Commentor questioned what the consequences would be to the offsite populations from a terrorist attack (such as a plane crash), what evacuation procedures would be followed, where people would be displaced, and what the government would pay for offsite actions. Commentor requested information on airborne and waterborne radiological risks. A commentor stated that the full risk of a terrorist attack involving a large airplane has not been adequately considered.

**Response:** *As discussed in Appendix D, Section D.2.3 of the LLNL SW/SPEIS, NNSA evaluated potential aircraft crash scenarios for LLNL facilities for all types of aircraft, including commercial aircraft. The methodology in DOE Standard 3014 “Accident Analysis for Aircraft Crash into Hazardous Facilities” was used for this evaluation. As shown in Table D.2.3–3, the calculated frequency of a commercial aircraft crashing into an LLNL facility is  $1 \times 10^{-8}$  per year or smaller. This frequency is much lower than the level considered “beyond reasonably foreseeable” and thus is not evaluated in detail in the LLNL SW/SPEIS.*

*It is not possible to predict whether intentional attacks would occur at LLNL or at other critical facilities, or the nature of the types of attacks that might be made. Nevertheless,*

*NNSA reevaluated scenarios involving malevolent, terrorist, or intentionally destructive acts at LLNL in an effort to assess potential vulnerabilities and identify improvements to security procedures and response measures in the aftermath of the attacks of September 11, 2001. Security at NNSA and DOE facilities is a critical priority for the Department, and it continues to identify and implement measures designed to defend against and deter attacks at its facilities. In March 2004, DOE's Office of Safeguards and Security Evaluations completed a special department-wide review at LLNL that included performance testing LLNL's Protective Force. LLNL was given a rating of "Effective Performance," which is the highest one possible.*

*Substantive details of terrorist attack scenarios and security countermeasures are not releasable to the public, since disclosure of this information may be exploited by terrorists to plan attacks.*

- 25.09** Commentor stated that the bounding accident scenarios described in the LLNL SW/SPEIS do not address the adverse effects of an accident involving D&D activities. The potential for an accident is apparent in the large scope of D&D (820,000 square feet). Additionally, there is no discussion of offsite transportation accident scenarios involving D&D waste.

**Response:** *This LLNL SW/SPEIS includes and assesses D&D actions as appropriate for each alternative. For example, as described in Chapter 3, Sections 3.2.10 and 3.3.19, D&D actions are included in the No Action and the Proposed Action alternatives, respectively. The Chapter 5 impact sections include impacts related to D&D. With respect to accidents specifically, the impacts from accidents involving D&D are bounded by other accidents. The primary hazard during D&D activities is occupational injuries to the employees performing the D&D operations. These impacts are addressed in the Human Health and Safety sections of Chapter 5 (5.2.14, 5.3.14, and 5.4.14).*

*With respect to transportation accidents, Appendix J, Section J.4 of the LLNL SW/SPEIS presents NNSA's analysis of potential accidents associated with transportation of the following four radiological shipment types: special nuclear material, transuranic waste, low-level waste, and tritium. The D&D waste volumes are included in this transportation analysis. NNSA examined the shipment campaigns under the No Action Alternative, Proposed Action, and Reduced Operation Alternative to identify bounding transportation accidents for each of these material types. NNSA calculated collective radiation dose to the public and LCFs from potential transportation accidents. The impacts of the accidents reported in Appendix J, Section J.4 are based on the assumption that the accidents would occur in the most populated regions along the route. Accidents in less populated regions or of lower collision impact could occur, resulting in smaller impacts. The accident probabilities were multiplied by the number of shipments.*

- 25.10** Commentor expressed concern regarding cancer risk of nuclear or biological materials along transportation routes, including material from D&D activities. A traffic accident involving the transport of any of these materials would pose great danger to the entire Bay Area.

**Response:** *Bounding transportation accidents are presented in Chapter 5, Section 5.5, which is supported by Appendix J. For purposes of analysis, NNSA used the computer code TRAGIS to identify routes and route demographics for shipments of radioactive materials and wastes. The code determines routes based on criteria supplied by NNSA and takes into account special provisions for highway route-controlled quantities. Consequently, the analyses take into account the population density of the Bay Area. See Comment Response 20.01 for additional information.*

*There is no cancer risk associated with the transport of biological material. See Comment Response 35.01 for more information concerning the shipment of biological samples to LLNL.*

## 26 NATIONAL IGNITION FACILITY

**26.01** Many commentors expressed concern and opposition regarding the proposed use of plutonium, highly enriched uranium, and lithium hydride in experiments in the NIF. Concerns centered on the potential for increasing the usefulness of the NIF for nuclear weapons development, including the design of new nuclear weapons. There were also concerns over the hazards to workers and the environment from these experiments. Commentors stated that DOE should provide a thorough review of the NIF's mission, environmental risks, proliferation impacts, and ability to achieve its stated scientific goal of ignition. The LLNL SW/SPEIS should provide a cost estimate for NIF experiments, equipment, and design. Details regarding design changes to existing target chamber and construction of expensive inner containment vessels were not provided in the LLNL SW/SPEIS. A commentor questioned the total cost of changes and modifications necessitated in the Proposed Action.

Commentors stated that the NIF appendix fails to adequately describe the programmatic impacts of the proposed experiments. Commentor stated that in the past, DOE denied that they would use fissile materials in NIF experiments. Some commentors suggested that new experiments at NIF be analyzed for reasonable alternatives within the DOE complex-wide SSM program. Other commentors requested the LLNL SW/SPEIS provide an alternative that includes the cessation of NIF operations.

**Response:** *The NIF mission need is presented in Appendix M, Section M.2 of the LLNL SW/SPEIS. This provides a timeline and summary from the original mission need statement for NIF approved by DOE in 1993 to the present, including the recent NNSA proposal to use plutonium, other fissile materials, fissionable materials, and lithium hydride in NIF experiments. In September 2000, the Secretary of Energy certified to Congress that the NIF supports the SSP and is a vital element in three important ways: 1) Experimental study of issues of stockpile aging or refurbishment; 2) Weapon science and code development; and 3) attracting and training the exceptional scientific talent required to sustain the program over the long term. As indicated in Appendix M, Section M.1.1, in November 2002, the NNSA approved proposing experiments on the NIF using plutonium, other fissile materials, fissionable materials, and lithium hydride. The proposed experiments using these materials directly enhance the ability of NIF to support*

*these activities. NNSA facilities and operations, including NIF, are operated in compliance with U.S. nuclear weapons policy.*

*The experiments will evaluate the physical properties of these materials in support of the SSP. All experiments being considered for NIF that use such materials would do so in extremely small quantities, many orders of magnitude less than would be needed for a nuclear weapon. A statement has been added to Appendix M, Section M.5.3 clarifying those experiments with gram quantities of weapons grade plutonium would be conducted in the NIF target chamber with an inner containment vessel.*

*NIF experiments will achieve temperatures and pressures needed to evaluate fundamental physical data on special nuclear materials that must still be resolved. This is because past experiments, including nuclear tests, did not fully examine the physical properties of weapons materials, either under the extreme conditions associated with nuclear weapons explosions or with the necessary level of precision required to validate computer models of nuclear weapons performance. These validated models will allow NNSA to assess the effects of aging and engineering modifications of the stockpile and as a result, to certify the safety, reliability, and performance of the stockpile without nuclear testing.*

*A major goal of NIF is to achieve fusion ignition in the laboratory. The addition of proposed experiments with the previously mentioned materials does not change NIF's basic missions nor affect its scheduled completion. The DOE goals for NIF, of providing a unique facility for SSP experiments and the achievement of fusion ignition with energy gain, remain unchanged.*

*The life cycle environmental and economic impacts of the NIF are contained in Appendix M. The cost of currently approved NIF operations and experiments are described in each year's annual budget submitted by the President to Congress. The cost of the inner containment vessel for the proposed gram-scale plutonium experiments was not estimated because detailed design work on the inner containment vessel, modification of the target chamber and associated systems will not be initiated until a decision is made on whether to use plutonium in NIF. A pre-conceptual design was performed that supports the environmental evaluation of the proposed experiments in Appendix M.*

*NNSA has developed an integrated program for SSP weapons physics experiments to be performed at NIF and other NNSA facilities. There are no current or planned facilities in the DOE complex able to perform experiments at the conditions attainable at NIF. Only NIF can achieve the necessary conditions of extreme temperature, pressure, density, and dynamic conditions required for these experiments. NIF remains the only facility that is expected to achieve fusion ignition with energy gain, addressing both SSP and basic energy science needs for the Nation. Canceling NIF would prevent DOE from being able to meet its Stockpile Stewardship Mission. The Proposed Action supports these missions and goals. The purpose and need for the use of the proposed materials is provided in Section M.2.4. That section discusses the complex-wide impacts of NIF and the relationship to the SSP.*

*The potential impact of the NIF on proliferation is addressed in Comment Response 01.01. For related information on the environmental impacts of NIF operations, see Comment Response 26.03.*

- 26.02** Commentors stated that analyzing NIF experiments in the course of the LLNL SW/SPEIS does not comply with the intent of the 1998 court order *NRDC v. Peña*, in which DOE was ordered to prepare a Supplemental SSM PEIS if DOE proposed using certain materials in NIF experiments.

**Response:** *The course of action that DOE has followed with regard to the Supplemental SSM PEIS complies with the August 19, 1998 court order NRDC v. Peña, Civ. No. 97-936(SS) (D.D.C.). By preparing the Supplemental SSM PEIS and analyzing the reasonably foreseeable environmental impacts of NIF experiments using plutonium, other fissile materials, fissionable materials, and lithium hydride, together with the LLNL SW/SPEIS for continued operation of LLNL, DOE has complied with the court order and has evaluated adequately the potential environmental effects of the Proposed Action, while also complying with its obligations under the NEPA.*

- 26.03** Commentors expressed the following concerns regarding the environmental impacts of NIF operations:

Commentors stated that using plutonium and fissile materials in NIF experiments would increase hazards to workers, public and the environment and that these issues are not adequately addressed in the LLNL SW/SPEIS.

The LLNL SW/SPEIS should address the inner containment chamber insertion and extraction processes in more detail and if this will involve a decontamination of the insertion port, the outer surface of the inner containment vessel, and decontamination of the outer chamber's inner surface. The removal of the inner containment vessel could result in additional personnel exposures. Explain how administrative controls could involve increasing the number of personnel exposed to keep individual worker dose within the administrative limits.

Table M.5.3.13.1–2 should be reformatted and the LLNL SW/SPEIS should reflect the fact that although many isotopes have short half-lives, many others have long half-lives.

Table M.3.2.1–1 identified maximum inventory mass in grams and commentors requested that maximum inventory activity in curies.

Commentor requested an explanation for the mass of particulates in the inner containment chamber listed at the bottom of Table M.5.3.13.1–1.

The term “non-yield” should be defined by a specific threshold of fission yield, as defined by the production of specific flux of prompt fission neutrons.

Additional information should be provided concerning the use of other actinides.

The relative effectiveness of cryopumps cooled with high pressure helium versus liquid nitrogen should be described, and a loss of coolant flow accident should be evaluated. Commentor questioned operation of the accumulation tank for fission products and fission product decay.

Inner containment vessel operations at the Tritium Facility adds effluents that should be accounted for in Appendix M.

Commentor stated that fission products are not produced by neutron activation.

Commentor stated that Section M.5.3.13.1 should be expanded to account for radioactivity in the NIF target bay area and in the Tritium Facility glovebox room where the sealed inner containment vessels will be breached.

Commentor stated that Tables M.5.3.13.1–1 and M.5.3.13.1–2 are missing data and should be revised to include mass numbers for materials generated during NIF experiments.

Lithium hydride hazards are not fully analyzed in the LLNL SW/SPEIS.

The LLNL SW/SPEIS should describe the gases and semi-fissionable by-products being released to the environment by proposed NIF experiments.

Commentors expressed concern about the criticality aspects of NIF experiments.

Commentor suggested that the NIF accident study does not account for anything other than fatalities.

Commentor stated that more detail should be provided on the definition of other fissile materials and specially prepared plutonium.

Commentor expressed concern regarding a 30 percent increase in radiation dose from the Proposed Action versus the No Action Alternative. Appendix M, Section M.3.1.4 states that neutrons from fusion experiments would penetrate the roof of the facility and cause skyshine radiation where neutrons scatter back down to the ground. Other neutrons would interact with structural materials and emit gamma rays that would reach the ground. Are better building materials available for use in the roof or structure that would trap the neutrons before escaping into the atmosphere and ground?

Commentor requested information on the results of yield experiments using depleted uranium in Section M.5.2.13.1 from the No Action Alternative.

Commentor stated that plutonium would be fissioned and vaporized in NIF experiments.

Commentor expressed concern about public exposure from the transportation of NIF materials.

Commentor was of the opinion that the manner of operation of the NIF Laser and Target Area Building would not be the same in the No Action and Proposed Action alternatives.

**Response:** *Appendix M evaluates the reasonably foreseeable environmental impacts to workers, the environment, and the public from the proposed use of plutonium, other fissile materials, fissionable materials, and lithium hydride.*

*The use of the inner containment vessel for plutonium experiments would result in worker dose from direct radiation from activated components and contamination during insertion and removal activities, exposure during transportation, and inspection and packaging operations at the Tritium Facility. Administrative controls including the use of protective clothing and equipment, radiation monitoring, use of contamination control practices, and a formal ALARA program would be used to minimize worker radiation dose. Information on the controls used at LLNL to protect personnel during radiological operations is included in Chapter 4, Section 4.16.2.2. The detailed operational aspects of the inner containment vessel insertion and extraction would be developed during the operational phase of this activity.*

*The analysis in Appendix M included isotopes that significantly impact the environmental analyses. Because of the very large number of isotopes, the tables were restricted to the predominant contributors to the fission product dose including those with release fractions orders-of-magnitude greater than the solid fission products. The fission products (in total) are not the major contributors; the combined doses from tritium (500 curies) and the actinides (particularly weapons grade plutonium) dominate the accident dose. Furthermore, the solid, long-lived fission products constitute a small fraction of the total fission product dose. Accordingly, the lack of complete accounting of every fission product isotope has a less than two percent impact on the total dose. Therefore, the long-lived isotopes such as cesium-137 and strontium-90 are not included in Table M.5.3.13.1–2. The comment that the table requires reformatting has been addressed and the table has been reformatted for the Final LLNL SW/SPEIS.*

*The maximum inventory in grams and curies is contained in Appendix M, Table M.5.3.13.1–1 and would not add to the clarity of the discussion in Table M.3.2.1–1.*

*The listed particulate quantity of 225 grams is the mass of material ablated from the interior surfaces of the inner containment vessel from a single 45 megajoules experiment. This clarification has been added to Appendix M, Section M.5.3.13.1.*

*Non-yield experiments are defined as experiments which do not have tritium and deuterium in the target and generate no measurable neutrons from fusion reactions. This has been added to Chapter 11, Glossary.*

*The use of “other actinides” is bounded by the analysis in Appendix M.*

*The NIF target chamber cryopumps have three stages. The first stage is cooled by liquid nitrogen to 80 Kelvin. The second and third stages are both cooled to 15 Kelvin by high-*

pressure helium. Both liquid nitrogen and high-pressure helium are used as cooling media for trapping material. Some fission products would be created during experiments involving fissile (e.g., uranium-235) or fissionable (e.g., uranium-238) materials in the presence of yield produced by inertial fusion targets without inner containment, and some would be eventually released to the environment as part of normal operations. Many of these fission products are short-lived, and would decay while still being held in the cryopump system that has liquid nitrogen and high-pressure helium final stage cooling. Alternately, they can be discharged to the accumulation tank and held until they have decayed. Both the cryopumps and the accumulator provide this hold-up process capability for the short-lived fission products. The loss of coolant to the cryopumps could raise the pressure in the target chamber but would not result in a release of radioactive material because there is no release path. The bounding accident is the unlikely occurrence of a beyond-design-basis earthquake immediately after a yield experiment that breaches the target chamber releasing the entire inventory of radioactive material. The quantitative amount of fission products would have decayed by a factor of 50 if they were discharged to the accumulation tank and held for 30 days. The quantitative amount of solid fission products that would be retained in the target chamber at the end of 1 year would be less than 1 milligram.

The tritium contained in the four proposed experiments with weapons grade plutonium in the presence of yield would be 8 curies in any year. The tritium released from NIF containment operations in the Tritium Facility are a part of the releases identified in the LLNL SW/SPEIS for the Proposed Action. The NIF tritium would represent less than 5 percent of the total tritium release from the Tritium Facility. The accompanying volatile and semi-volatile fission products if all released through the stack would have a dose contribution substantially less than the tritium contribution.

The statement on fission products not being produced by neutron activation has been rewritten in Appendix M, Section M.5.3.8.4.

Radioactivity in the NIF target bay area is covered in Appendix M, Section M.5.3.13.1. Operations at the Tritium Facility are covered in the LLNL SW/SPEIS in Chapter 5, Sections 5.3.8, 5.3.13, and 5.3.14 for Air Quality, Materials and Waste Management, and Human Health and Safety, respectively.

Section M.5.3.13.1, has been developed to include the additional inventories that would result from use of the new Proposed Action materials and additional quantities of depleted uranium and beryllium. The tritium and main chamber particulates would be the same as for the No Action Alternative and would be included in the Proposed Action. Because of the very large number of isotopes, the tables in this section were restricted to the predominant contributors to the fission product dose including those with release fractions orders-of-magnitude greater than the solid fission products.

Appendix M analyses the use of lithium hydride in NIF experiments under the Proposed Action. These experiments would involve gram and sub-gram quantities of lithium hydride or lithium deuteride. Lithium hydride is hazardous and can combust; however in

*the gram quantities that are involved in the proposed experiments, lithium hydride can be handled safely. Additional information on the exposure to personnel from the use of lithium hydride can be found in Appendix M, Section M.5.3.14.2. Information on the accidental release of lithium hydride can be found in Appendix M, Section M.5.6.2.2.*

*Gases and semi-volatile fission products are part of the evaluation of the radioactive release to the atmosphere in Sections M.5.3.8.4 and M.5.3.14.1. These are accounted for in the radiological releases that are estimated to result in no LCFs to the public or workers. The total NIF radioactive emissions from the stack are 45 curies per year (30 curies are tritium). This results in a site boundary dose of 0.27 millirem per year to the maximally exposed person (compared to 300 millirem natural background radiation) and would be expected to result in no LCFs to the public. The stack will be continuously monitored for radioactive effluent.*

*The quantities of plutonium and highly enriched uranium used in these experiments are too small to experience criticality under the highest temperatures and pressures generated by the NIF.*

*The methodology of accident analysis and human health and safety are discussed in Appendix D and Chapter 5, Section 5.1.14. The accidents and the resulting fatalities are analyzed to provide the consequences of bounding accidents. Additional information is included in Comment Response 23.02.*

*The Proposed Action would involve experiments with other fissile materials. The inventories of any future fissile material experiments would be limited, such that their environmental impacts are bounded by the environmental impacts of the proposed use of highly enriched uranium without containment or weapons grade plutonium with containment. Specially prepared plutonium refers to the combination of quantity and isotopic content that could be fielded in NIF experiments without inner containment, while ensuring that the environmental impact of these experiments are bounded by the impact of proposed experiments using highly enriched uranium.*

*The 6-foot-thick concrete shielding around the target bay was designed to minimize exposure to workers and the public. The 30 percent increase in dose is caused by fission products and not by neutron skyshine. This increase results in no additional LCFs. Refer to Appendix M, Section M.5.3.8.4 for additional information.*

*There are no yield experiments with depleted uranium considered in the No Action Alternative and therefore no fission products.*

*Fission products generated from NIF experiments are analyzed in Appendix M. The proposed experiments with plutonium range from those in which the material remains solid to those in which the plutonium could be vaporized. The impacts are included in Appendix M, Section M.5.*

*The transportation accidents are discussed in the Appendix M, as is exposure from normal transportation. Both impacts are very small and result in no projected LCFs. The dose that the truck driver receives during normal operation is negligible and the driver is with the material throughout the trip, the dose received by a member of the public standing next to the truck would be less (proportional to the time spent versus the time the driver spends).*

*The operation of the target chamber differs in handling the inner containment vessel but the laser system and basic building operation are largely unaffected as described in Appendix M, Section M.3.1.*

**26.04** Commentors expressed concerns regarding the environmental impacts of NIF's use of tritium.

Many commentors expressed concern that producing targets at LLNL will increase the amount of tritium that is used in the Tritium Facility from just over 3 grams to 30 grams, which is nearly a 10-fold increase. Commentor stated that the proposed tritium increase is inconsistent with plans described in the SSM PEIS. The prior document determined that tritium targets were to be fabricated offsite because the operation would be conducted in a highly populated area. No justification for the departure from the original NIF EIS has been offered in the LLNL SW/SPEIS. Commentors requested that DOE revise the LLNL SW/SPEIS to include the purpose and need for manufacturing tritium targets onsite at LLNL.

The amount of curies released per year to the environment from NIF operations may need an upward revision because the maximum annual throughput is given as 1,750 curies per year. For example, the 30 curie value shown in Table M.5.2.8–3 is approximately 7,000 times the value shown for activated air production and emissions. Analysis should be based upon annual tritium emission of at least 100 curies.

Regarding page M-49 of the Draft LLNL SW/SPEIS, the LLNL SW/SPEIS should state that nearly all targeted tritium will end up in the waste stream or the atmosphere. The “tritium collection system” should be explained in greater detail.

Regarding page M-68 of the Draft LLNL SW/SPEIS, tritium gas should be included in Table M.5.3.13.1–2. Also, tritium removal by high-vacuum cryopumps should be described and analyzed.

Commentor expressed concern regarding the possibility of an accidental breach of a tritium firing chamber.

Since removal of first wall panels is only planned for every eight years, tritium contamination will build up over time, therefore, annual attempts to clean chamber surfaces could be quite difficult.

Commentor stated that Appendix M, Section M.5.2.13.1 misreferences Section M.5.2.8.4.

**Response:** *The purpose and need for NIF is provided in Appendix M, Section M.2. In the SSM PEIS, DOE analyzed target fabrication at offsite locations, such as LANL, as the bounding case. The SSM PEIS included transportation evaluations to identify the environmental impacts of transporting the targets filled with tritium from offsite facilities to LLNL. At the time of the SSM PEIS, DOE had not determined where targets would be filled. NNSA now proposes to fill NIF targets in the LLNL Tritium Facility as well as receiving targets from offsite locations. The LLNL SW/SPEIS analyzes target fabrication at the Tritium Facility and includes the resulting environmental impacts. See Comment Response 34.01 for information on the increase in the tritium limits and the environmental impacts at the Tritium Facility.*

*The SSM PEIS (DOE 1996a) and the LLNL SW/SPEIS describe the tritium confinement system: target chamber and tritium processing system. The tritium processing system recovers unburned tritium from experiments using dryer beds and is described in Appendix M, Section M.5.2.13.3.1. The use of this system is expected to result in tritium emissions of no greater than 30 curies based on a throughput of 1,750 curies per year in experiments. These emissions will be monitored continuously.*

*Not all target tritium ends up in the waste stream or the atmosphere because some of the tritium is burned. Based on the assumption of a 20 megajoules yield, approximately 20 percent of the tritium is consumed in the fusion reaction. Approximately 80 percent of the tritium will appear in the waste stream. This includes tritiated water absorbed on the molecular sieve traps, the tritium bound to the chamber first walls and debris shields, radioactive waste stream, and tritium adsorbed on the surfaces of vacuum components. The request to provide details of the tritium collection system is referred to Appendix M, Section M.1.2, where the tritium processing system, which recovers tritium on molecular sieve traps, is described in sufficient detail for the purpose of environmental evaluation.*

*In Appendix M, Section M.5.3.13.1, a sentence has been revised deleting information stating that tritium and deuterium are included in Table M.5.3.13.1–2.*

*The NIF target chamber cryopumps have three stages. The first stage condenses water including tritiated water. The second stage condenses other vapors except hydrogen, helium, and neon. The third stage is a bed of activated carbon where hydrogen, tritium, helium, and neon are cryoadsorbed. Additional information can be found in Comment Response 26.03.*

*A complete breach of the tritium firing chamber is evaluated in Appendix M, Section 5.6, in which a postulated beyond design basis earthquake occurs at the same time as a maximum yield shot breaching the target chamber and releasing the inventory to the atmosphere. The consequences of this bounding accident are no projected LCFs to the public.*

*It is anticipated that the first wall panels will be removed and cleaned annually. The estimated lifetime of the first wall panels is 8 years.*

*The reference to Radiological Air Quality in Appendix M, Section M.5.2.13.1 has been corrected and now refers to Section M.5.2.8.*

**26.05** Commentor stated the following technical and engineering issues:

Commentor stated that Table M.5.3.13.1–2 is poorly formatted and missing fission product radioisotope data. This omission needs to be rectified in the Final LLNL SW/SPEIS. The public should be given an explanation for the omission, and discuss how the impact analysis would be affected.

Regarding page M-13 of the Draft LLNL SW/SPEIS, NIF Operations Facility Utility Usage, the list of utilities should include the high vacuum system. Also, Section M.3.1.2, Laser Operation, should include another bullet item under annual total yield of 1,200 megajoules per year. The new bullet item should provide the total energy usage of the facility of approximately 500,000 megajoules per year.

Commentor requested additional information on Target Chamber and associated system design changes required because of proposed NIF experiments.

Commentor stated that additional information be provided on the advanced design and planning of the special glovebox.

Commentor found many distortions, errors, and omissions regarding radionuclide materials management. The LLNL SW/SPEIS ignores the contribution of many other radioactive sources. Also, exposure management would require interim cleanup actions and rotating personnel to minimize individual doses and limit dispersal of contamination. Commentor stated that trapped tritium should be included in Table M.5.2.13.1–1.

Commentor stated that the decision to use oil-free pumps is based on a 1998 plan. The LLNL SW/SPEIS also states that there is still uncertainty about the technology and resulting vacuum pump oil volume.

Table M.5.3.8.4–1 should include a third column containing the half-lives of the listed elements. Another footnote should be added that specifies that the table is based upon equally spaced experiments, beginning 1 year before the derived integrated values.

Commentor stated that Table M.5.3.13.1–2 contains seven sets of data and time frames, format, and lack of detail.

**Response:** *The high vacuum system is not a facilities utility and therefore is not listed in Appendix M, Section M.5.2.12. The facility electrical power consumption along with other utilities is found in Appendix M, Table M.3.4–1. The majority of the electrical*

consumption is for the heating and ventilation systems to maintain precise temperature, humidity, and cleanliness conditions in the NIF building.

Possible modifications to the NIF target chamber and associated systems to accommodate the proposed inner containment vessel have not been designed in detail, nor has the design of the inner containment vessel for plutonium experiments. The detailed design would proceed only after the NEPA determination is complete with a published ROD. The determination has been made that the inner containment vessel will fit through the currently existing large port on the chamber equator. Appendix M, Section M.3.2.1 describes changes to the current target chamber (addition of hard points for seismic support of the inner containment vessel), and the target area (installation of tracks from the Diagnostic Building and a custom built manipulator).

The special glove box is listed in Appendix M, Section M.3.2.1 and would be needed in the Tritium Facility to retrieve samples from the inner containment vessel and to decontaminate and dismantle it, as necessary, prior to shipment to the NTS. The potential worker exposure to radiation from the use of the glove box is included in the NEPA determination as part of the 4 person-rem per year estimates for worker dose in Appendix M. The detailed design of the inner containment vessel would proceed only after the NEPA determination is complete.

The proposed new paragraphs for Appendix M, Section M.5.2.13.1 (written by the commentor) have been reviewed and because they are associated with the No Action Alternative, with no experiments with plutonium and no fission products, the proposed additions are not warranted. Comments on the format and content of Table M.5.2.13.1–1 request fission products. Fission products are not included because they are not generated in the No Action Alternative. Tritium that is absorbed or embedded on the target chamber surface is not released and is not listed in this table.

The NIF vacuum pumps do not expose oil to tritium; therefore, there is no need to increase mixed waste projections.

In general, the listed isotopes in Table M.5.3.8.4–1 have relatively short half-lives (less than one day). The exceptions are krypton-85 and iodine-131, which have half-lives of 10.8 years and 8 days, respectively. Radioactivity from long-lived isotopes does not add any significant impact because the dose is dominated by volatile fission products with shorter half-lives. The statement in Appendix M, Section M.5.3.8.4, referring to possible sources of fission product emissions, has been deleted to be consistent with footnote “b” of the table.

Responses to comments on format and editorial concerns are addressed in Comment Response 26.06. See Comment Response 26.03 for information concerning Table M.5.3.13.1–2.

**26.06** Commentor stated the following format and content issues as follows:

Commentors requested word and formatting changes and definitions to several sections of Appendix M. Commentor requested quantifying the increase in low-level waste related to filters between the Proposed Action and No Action Alternative.

Design, construction, and instrument costs associated with the neutron spectrometer should be fully accounted for as a part of NIF costs. Additional information should be provided for the need of the neutron spectrometer.

Commentor stated that the phrase “fissile materials” or “fissionable” materials should be removed. If not, add fissionable to the glossary and expand the list of fissile materials in the glossary.

**Response:** *Suggested word and formatting changes and definitions to Appendix M were reviewed and the existing wording was found to be adequate. Therefore, these comments did not result in changes to Appendix M. There is a 0.04 cubic meter per year increase in filter waste. The added filter waste results in less than a 0.1 percent increase in the total annual low-level waste generation.*

*The neutron spectrometer would provide a sensitive and accurate measure of the neutrons generated in ignition experiments with yield at NIF. Neutron spectrometers are standard diagnostic instruments at other DOE facilities. The neutron spectrometer would not be required until after the early campaigns of sub-ignition NIF fusion experiments are completed. A preconceptual design sufficient to describe the excavation quantities of hazardous and toxic materials and protection of the groundwater has been completed to support the evaluation of the environmental consequences of construction and operation including the manpower to support the socioeconomic evaluation. The cost of the neutron spectrometer can be estimated, but is not precisely known at this time. It would eventually be based on a detailed design that could only be undertaken after this NEPA determination is completed with the publication of a ROD.*

*Fissile and fissionable materials are separate categories and therefore not redundant. Definitions have been added to the Glossary in Volume I, 1) fissile materials are isotopes that readily fission after absorbing a neutron of any energy, either slow or fast and 2) fissionable materials are materials that will undergo nuclear fission when exposed to fast neutrons.*

**26.07** Commentors stated the following comments concerning waste generated by NIF.

Commentors suggested that the NIF portion of the waste generated in Building 331 should be included in the NIF waste numbers.

The LLNL SW/SPEIS does not analyze potential problems that would prevent the target chambers from being accepted at the NTS for burial (i.e., mixed waste).

**Response:** *The additional waste streams generated by the handling of the inner containment vessel in the Tritium Facility (Building 331), such as contaminated inspection tools, form a small addition to the overall Tritium Facility waste streams. These are accounted for in Appendix B, which provides the cumulative impact of all waste streams. The inner containment vessel is accounted for in Appendix M, Section M.5.3.13.*

*Based on the experiments analyzed in Appendix M, the inner containment vessel with the residual material from the proposed experiments would meet the NTS waste acceptance criteria for low-level radioactive waste. The contamination within the inner containment vessel would meet acceptance criteria for both radioactive materials (i.e., less than 100 nanocuries per gram concentration) and nonradioactive materials (i.e., nonhazardous materials in form or concentration that do not meet either Resource Conservation and Recovery Act of 1976 or California-only hazardous waste criteria). Appropriate sampling and analysis would be completed on each of the inner containment vessels before disposal.*

## 27 INTEGRATED TECHNOLOGY PROJECT

**27.01** Commentors stated that the purpose and need for plutonium Atomic Vapor Laser Isotope Separation (AVLIS) is not adequately discussed in the LLNL SW/SPEIS. Some commentors stated that AVLIS technology provides a bridge between civilian nuclear fuel cycles and weapons production. Commentor questioned the need to produce weapons grade plutonium. DOE should evaluate other alternatives to the ITP, such as locating the facility at another site.

Many commentors expressed concern and opposition over the proposed AVLIS, the concerns centered around three issues: 1) the plans to increase the amount of plutonium that can be used in a single room in the Superblock, 2) the health risk of the use of plutonium in this project, and 3) it would increase the potential for nuclear proliferation. Commentors supported ITP and AMP and did not believe that there would be a health risk.

Commentors stated that the AVLIS project has been secretly and illegally revived.

**Response:** *DOE/NNSA disagrees that the AVLIS project has been secretly and illegally revived. Furthermore, NNSA has reconsidered its requirements and determined that there is no reasonably foreseeable need to pursue either the AMP or ITP. Therefore, the AMP has been removed from the No Action Alternative and ITP has been removed from the Proposed Action as discussed in Chapter 1, Section 1.8 and Chapter 3, Section 3.3.3. The impacts throughout the LLNL SW/SPEIS have been revised reflecting these changes.*

*For information concerning the increase in MAR and health risk from normal operations, see Comment Response 33.01. For information regarding nuclear nonproliferation, see Comment Response 01.01.*

**27.02** Commentors have called for cancellation of the ITP because it would cause an increase in plutonium MAR from 20 kilograms to 60 kilograms. Commentors believe the ITP is unsafe, an environmental threat to the people of California, a risk to health, will increase air pollution, increase exposure, and will increase generation of TRU waste. Commentors want to decrease MAR. A commentor stated that the hazards are inadequately examined in the LLNL SW/SPEIS. Commentors suggested that the accident analysis for the ITP be redone.

Commentors also noted that the LLNL SW/SPEIS should specify what plutonium isotopes will be harvested and for what purposes. There is no analysis for alternate methods of producing plutonium.

The LLNL SW/SPEIS should identify why environmental evaluations were based on 60 kilograms MAR and not the potential plutonium increase of 120 kilograms. Regarding Table N.5.2.5–2, justification is needed for assuming a collective dose rate of 1 millirem per hour, as opposed to 4 millirem per hour. A commentor questioned the adequacy of NEPA review for deciding to run plutonium in the engineering demonstration hardware.

**Response:** *NNSA has reconsidered its requirements and determined that there is no reasonably foreseeable need to pursue either the AMP or ITP. Therefore, the AMP has been removed from the No Action Alternative and ITP has been removed from the Proposed Action. Changes have been made in Chapter 1, Sections 1.5.2, 1.5.3, and 1.5.4 and Chapter 3, Sections 3.3.2, 3.3.3, and 3.3.4 in the Proposed Action. These revisions include changing the proposed increase in the administrative limit for plutonium to 1,400 kilograms (compared to 1,500 kilograms in the Draft LLNL SW/SPEIS) and changing the proposed increase in the MAR limit to 40 kilograms (compared to 60 kilograms in the Draft LLNL SW/SPEIS). Chapter 1, Section 1.8 summarizes the changes made from the Draft LLNL SW/SPEIS. The impacts of the removal of AMP and ITP are reflected in Chapter 5, Appendix B, Appendix D, and Appendix J. For information concerning the increase in MAR and health risk from normal operations and accidents see Comment Response 33.01.*

**27.03** Commentors expressed concern regarding the waste stream created at the proposed ITP. The original 1995 WIPP certification and baseline inventory report does not include the disposal of TRU waste. Commentor stated that the ITP appendix should provide a cost-benefit analysis of the different waste disposal activities discussed in the LLNL SW/SPEIS. Commentor questioned the basis for assuming that LLNL will receive feed materials from which americium have been completely removed from Hanford and Savannah River Site. This assumption is unrealistic and needs to be justified or changed. A commentor suggested that Appendix N evaluate exposure from shipment of TRU waste from ITP.

**Response:** *NNSA has reconsidered its requirements and determined that there is no reasonably foreseeable need to pursue either the AMP or ITP. Therefore, the AMP has been removed from the No Action Alternative and ITP has been removed from the Proposed Action. The impacts in the LLNL SW/SPEIS have been revised reflecting these*

changes. As a result of this change the waste analysis in the LLNL SW/SPEIS has been updated in Chapter 3; Chapter 5, Sections 5.2.13 and 5.3.13; Appendix B; and Appendix J. Responses to other waste issues can be found in Comment Responses 22.01 through 22.07.

## 28 POLLUTION PREVENTION

- 28.01** Commentor stated that DOE should revise its Storm Water Pollution Prevention Plan (SWPPP) to include the new locations of operations. In addition, post construction stormwater management controls should be included in the SWPPP, as appropriate, to limit discharge of sediment.

**Response:** *LLNL's SWPPPs are based on activities that have the potential to pollute stormwater, and Best Management Practices (BMPs) are applied to minimize pollution. Operations at new facilities would be evaluated to determine whether or not the existing BMPs apply. If not, the SWPPPs would be revised to include new industrial activities and BMPs. Sediment control measures are included in the industrial activity SWPPPs to address sediment sources from routine operations, such as grounds maintenance. Post construction stormwater management controls are required by the California General National Pollution Discharge Elimination System (NPDES) permit for stormwater discharges associated with construction activities. These controls would be addressed in the project-specific construction SWPPPs, as required.*

## 29 EMERGENCY RESPONSE

- 29.01** Commentor requested that agreements and arrangements made with fire protection, police, and security and emergency services for incidents be available in order for the community to evaluate their adequacy. The LLNL SW/SPEIS should also provide information on the adequacy of emergency response preparation. Commentor also requested emergency services information along the planned transportation routes in California for hazardous and radioactive materials/waste shipments and capabilities for responding to a major accident or terrorist attack against these shipments. Commentors questioned the availability of emergency personnel following a crisis.

Commentor stated that the LLNL SW/SPEIS should categorize the types of accidents involved in the Emergency Response Summary (1999-2002) and how they were addressed.

**Response:** *Emergency response agreements have been negotiated and signed with state, county, and local municipal officials. For a list of those agencies see Appendix I, Section I.1.2. The LLNL Emergency Plan (LLNL 2003a) describes the LLNL Emergency Response Organization and the interfaces and agreements between DOE, NNSA, and other Federal Agencies; California State Government such as the Governors Office of Emergency Services and the California Highway Patrol; and local emergency response organizations. The plan describes the responsibilities of personnel in the Emergency*

*Response Organization and describes the coordination that would take place in the event of an emergency using available emergency response personnel.*

*The analyses in the LLNL SW/SPEIS do not require a more detailed categorization or listing of how the response calls were addressed. NNSA believes the categorization in Chapter 4, Table 4.4.1.1–1 Summary of Response Calls for 1999 through 2002 adequately reflects the nature and quantity of emergency responses. Hazardous material Operational Emergencies may be classified in order of increasing severity as an Alert, Site Area Emergency, or General Emergency as defined in the LLNL Emergency Plan.*

*The accident analyses in Appendix D are conservative with little or no credit taken for existing preventative and mitigative features in each building or operation analyzed or for the safety procedures that are mandatory at LLNL. As stated in Section D.2.2.1, the accident analyses in Appendix D do not take credit for emergency response and protective actions in their evaluation of consequences. The evaluations of intentional attacks are contained in classified and official use only documents. The information in these documents is used to train and evaluate emergency response and protective force personnel. Disclosure of information regarding potential vulnerabilities, postulated modes of attack, methods of deterring such attacks, and possible consequences of an attack could be used by terrorists to plan attacks.*

*Shipments of TRU waste follow planned routes coordinated with the state of California and the Western Governors' Association. Special nuclear material (SNM) shipments are escorted and the specific schedules and transportation routes are classified or for official use only. DOE has established emergency response programs for transportation of TRU waste and SNM. The impact of transporting TRU waste and SNM is analyzed in Appendix J. Offsite transportation accidents are analyzed in Appendix J and onsite transportation accidents are analyzed in Section D.2.4.15. These analyses conservatively bound the environmental impacts of the reasonably foreseeable LLNL shipments of waste and SNM.*

### **30 SECURITY**

- 30.01** Commentor expressed concern regarding terrorist attacks and security at LLNL. Commentors stated that it is important that information regarding terrorist attacks and Superblock security be made public. The analysis should include the extent of casualties and contamination in the event of a successful terrorist attack. Another commentor stated that the LLNL SW/SPEIS should have considered the most basic terrorist attack, such as a crash into the Superblock building from a truck loaded with explosives. A comparative analysis of the alternatives for continued operation of LLNL would contrast the consequences from 20 kilograms versus 60 kilograms of plutonium subject to blast and fire from such an explosion. Some commentors expressed concern regarding how radiological or biological material would be secured in the event of an accident. The LLNL SW/SPEIS should discuss a range of intentional attack scenarios (e.g., terrorist, theft, sabotage) and provide a qualitative consequence analysis. This is recommended by DOE Office of NEPA and Policy Compliance, Recommendations for Analyzing Accidents Under NEPA, Final Guidance, July 2002, Attachment 1.

Commentor asked for an explanation of how radioactive material will be secured when transported and used outside the Superblock. Some commentors expressed concern about making the Bay Area an attractive target for terrorists; and questioned LLNL's readiness to protect citizens in the event of a terrorist attack. Another commentor requested we add terrorist threats of theft as an environmental and public health concern. The Livermore Site is highly vulnerable to an external attack and is not an appropriate place for storing and processing nuclear explosive materials. Intentional terrorist acts could cause a potential release and should be analyzed in the LLNL SW/SPEIS.

**Response:** *It is not possible to predict whether intentional attacks would occur at LLNL or at other critical facilities, or the nature of the types of attacks that might be made. Nevertheless, NNSA reevaluated scenarios involving malevolent, terrorist, or intentionally destructive acts at LLNL in an effort to assess potential vulnerabilities and identify improvements to security procedures and response measures in the aftermath of the attacks of September 11, 2001. Security at NNSA and DOE facilities is a critical priority for the Department, and it continues to identify and implement measures designed to defend against and deter attacks at its facilities. In March 2004, DOE's Office of Safeguards and Security Evaluations completed a special department-wide review at LLNL that included performance testing LLNL's Protective Force. LLNL was given a rating of "Effective Performance," which is the highest one possible.*

*Substantive details of terrorist attack scenarios and security countermeasures are not releasable to the public, since disclosure of this information may be exploited by terrorists to plan attacks. The information in these documents is used to train and evaluate emergency response and protective force personnel.*

**30.02** Commentor expressed concern that security systems and personnel are inadequate. The LLNL SW/SPEIS should respond to DOE Secretary Abraham's comments regarding the vulnerability of securing nuclear materials at LLNL and discuss past security deficiencies. The LLNL SW/SPEIS needs more detail concerning security force's screening, training, number of officers, hours worked, and available equipment. DOE should provide an unclassified security analysis that covers the classified security information that was not provided to the public. Commentors questioned why the unclassified and detailed Government Accounting Office (GAO) and Project on Government Oversight (POGO) reports were not referenced in the LLNL SW/SPEIS.

**Response:** *DOE continuously evaluates security measures at LLNL and provides improvements as necessary. Details concerning security are classified and beyond the scope of this LLNL SW/SPEIS.*

*Only documents used in the preparation of the LLNL SW/SPEIS were included as references.*

## 31 REGULATORY COMPLIANCE

**31.01** Commentors stated that the LLNL SW/SPEIS fails to assess a range of reasonable alternatives, as required under NEPA. Commentors indicated the difference between the No Action and the Reduced Operation alternatives is not clearly defined in the LLNL SW/SPEIS. One commentor asserted that the alternatives are “sham constructs” because environmental impacts do not significantly differ between alternatives. The LLNL SW/SPEIS only considers extremes and does not evaluate reasonable alternatives to develop an informed agency decision. DOE must examine a true alternative based on a zero case, in conformity with the requirements of the NPT. DOE has failed to analyze the need for the Proposed Action and impacts of these actions. Commentors suggested that the alternative of “delaying the project” needed to be considered. Commentors questioned if LLNL staff made alternative proposals that were not discussed in the LLNL SW/SPEIS. Commentors stated that the LLNL SW/SPEIS should provide justification that the NIF, Building 332, and Terascale are necessary to maintain the Nation’s nuclear weapons stockpile. Commentors stated that there should be an alternate method of maintaining a nuclear deterrent other than returning to the spending levels and programs of the Cold War. There is, however, no such alternative analyzed in the LLNL SW/SPEIS.

Commentor stated that the LLNL SW/SPEIS should clarify the relationship between each project’s final preferred alternatives; disclose impacts of reasonable scenarios that have not been addressed; and identify how decision-making for the respective projects is expected to proceed.

**Response:** *The LLNL SW/SPEIS analyzes alternatives considered reasonably foreseeable by NNSA that respond to the programmatic purpose and need. As indicated in Chapter 1 of the LLNL SW/SPEIS, LLNL is responsible for maintaining the safety, security, and reliability of the Nation’s nuclear stockpile as part of the NNSA’s SSP. As described in Section 1.3, the continued operation of LLNL is critical to NNSA’s SSP and to preventing the spread and use of nuclear weapons worldwide. LLNL conducts a wide range of stockpile surveillance activities to assess the safety and reliability of weapons in the stockpile and to better understand the effects of aging on weapons. These surveillance activities include evaluating the pits in the primaries of nuclear weapons. LLNL is the design laboratory for four weapons systems in the stockpile: the W87 and W62 intercontinental ballistic missile warheads, the B83 bomb, and the W84 cruise missile.*

*The Proposed Action evaluates the environmental impacts of weapons and non-weapons new initiatives, activities, projects, and facilities construction projected at LLNL for the foreseeable future (nominally 10 years). Those environmental impacts are compared with the No Action and the Reduced Operation alternatives to provide the decisionmaker with a range of alternatives needed for an informed choice. Figures S.5–1 and 3.1–1 have been amended to better clarify the differences between the alternatives.*

*As stated in Chapter 3, Section 3.2, the No Action Alternative was analyzed to comply with CEQ’s NEPA implementing regulations (40 CFR Parts 1500-1508), providing a*

*baseline against which the impacts of the Proposed Action and Reduced Operation Alternative can be evaluated. The No Action Alternative is to continue the current authorized level of operation; it evaluates ongoing programs and operations, including approved interim actions, facility construction, facility expansion or modification, and facility D&D for which NEPA analysis and documentation already exists. The No Action Alternative accounts for the fact that LLNL has been an operational DOE laboratory for more than 50 years, with continuing missions expected for the foreseeable future. The No Action Alternative would be equivalent to the “delay” alternative described by commentors.*

*The Reduced Operation Alternative represents an approximate 30 percent reduction in SSP activities at LLNL. Specific activities, for which there is current NEPA approval, are proposed for reductions to a level that provides only for mission readiness (i.e., can be ramped up to full operation if required). Requests for further reductions, to include elimination of all nuclear weapons related activities, are inconsistent with LLNL’s DOE assigned mission in the SSP (see Chapter 3, Section 3.5 of the LLNL SW/SPEIS for a more detailed discussion). No new proposals or activities beyond those with existing NEPA approval are included in this alternative. Although the environmental impacts associated with some resources may not significantly differ, DOE thinks that a range of reasonable alternatives was considered given the purpose and need of the LLNL SW/SPEIS.*

*The LLNL SW/SPEIS and associated reference documents provide justification that the NIF, Building 332, and Terascale are necessary to maintain the Nation’s nuclear weapons stockpile. Chapter 3, Section 3.5, discusses alternatives such as shutting down LLNL and/or converting LLNL to an academic or environmental research laboratory. As discussed in that section, these alternatives were considered, but eliminated from detailed study because they would not satisfy the purpose and need for the Proposed Action. The LLNL SW/SPEIS analyzes a range of reasonable alternatives based on NNSA’s review of its programmatic needs, not based on recommendations of individual LLNL staff. With respect to the preferred alternative, Section 3.7 now identifies the Proposed Action as the preferred alternative. See Comment Response 01.01 for information concerning the NPT.*

*The LLNL SW/SPEIS distinguishes the specific impacts for the use of the proposed materials in NIF and the site-wide impacts of the proposed actions listed in Chapter 3. The specific impacts of using the proposed materials on NIF are identified in Appendix M. The site-wide impacts for the Proposed Action, including NIF’s use of the proposed materials, are identified for each of the resource areas in Chapter 5.*

*The decision as to which NNSA will take, will be announced through the issuance of a ROD. The ROD would be issued no sooner than 30 days after the Final LLNL SW/SPEIS is filed with the EPA. The ROD will state what decisions have been made and identify all alternatives considered by the agency in reaching these decisions, specifying the alternatives which were considered to be environmentally preferable. Additionally, the ROD may discuss preferences among alternatives based on relevant factors including*

*economic and technical considerations and agency statutory missions. The ROD will also identify and discuss all such factors including any essential considerations of national policy, which were considered by the agency in making its decisions and state how those considerations entered into these decisions.*

- 31.02** Several commentors stated that the comment period did not allow for sufficient review of this complex 2,000-page document and ask for extensions. Another commentor requested that DOE provide additional public hearings.

Commentors contended that the LLNL SW/SPEIS underestimates long-term, cumulative, and reasonably foreseeable impacts and suggested that the analysis cover more than 10 years.

Commentors requested technical appendices. Another commentor questioned the need to complete the LLNL SW/SPEIS, provide reasonable alternatives, and render a decision when there are still unknowns and concerns for finding disposal paths for waste. A commentor stated that there is no explanation for waiting an extra two years relative to the 1997 supplement to prepare this LLNL SW/SPEIS.

Commentors questioned whether their comments would be considered.

**Response:** *DOE/NNSA complied with all applicable laws, regulation, and guidance regarding the preparation of the LLNL SW/SPEIS. The comment period for the Draft LLNL SW/SPEIS was 90 days, which is twice as long as the CEQ 45-day requirements. DOE/NNSA believes the 90-day comment period was adequate. In addition, five public hearings were held during the 90-day comment period, which provided a brief discussion of the LLNL SW/SPEIS and an opportunity for questions and answers as well as an opportunity to comment on the Draft LLNL SW/SPEIS. Moreover, all comments were considered equally, whether submitted during a public hearing, letter, fax, or e-mail. Following the comment period, NNSA considered all comments received and made changes to the Draft LLNL SW/SPEIS, as appropriate. This Comment Response Document contains all comments received up to two weeks after the close of the public comment period and DOE/NNSA responses to these comments. Comments received more than two weeks late were also considered although were not specifically included in Chapter 2 of this Comment Response Document. All unclassified references for the LLNL SW/SPEIS were made available in the DOE/LLNL reading rooms as listed in Appendix L.*

*As described in Chapters 4, 5, and Appendix B, there are known waste management disposition paths for all wastes that would be generated at LLNL.*

*This LLNL SW/SPEIS was prepared at a time when DOE/NNSA had developed proposals that were ripe for analyses in an EIS. Information pertaining to NNSA's planning and schedule for completing the LLNL SW/SPEIS is discussed in Chapter 1, Section 1.4.*

*DOE/NNSA believes a 10-year planning horizon is reasonable, especially given the requirement under the DOE NEPA regulations to evaluate site-wide documents every 5 years (see 10 CFR §1021.330 [d]). The 10-year planning assumption ensures that the LLNL SW/SPEIS looks at potential actions and alternatives that are both within and beyond the 5-year reevaluation. The LLNL SW/SPEIS contains analysis of impacts for the continued operations at LLNL for the duration of the planning horizon.*

- 31.03** Commentor stated that the LLNL SW/SPEIS should be reviewed by an independent organization. Several commentors suggested that DOE should commit to a fixed schedule of revised EIS/Environment Impact Report reviews, not greater than every five years. The LLNL SW/SPEIS appears to be based on a number of “microreviews” of facilities, which are being expanded or modified. In addition, the LLNL SW/SPEIS does not have any documentation of a unitary decision linking the Proposed Action activities. This is needed to evaluate the nationwide and programmatic effects of the Proposed Action.

Commentor stated that the LLNL SW/SPEIS should clarify the relationship between each project’s final preferred alternatives; disclose impacts of reasonable scenarios that have not been addressed; and identify how decision-making for the respective the use of proposed materials on NIF in relation to the other decisions in the document. Commentor indicated that the LLNL SW/SPEIS does not distinguish each projects’ specific environmental impact.

**Response:** *The LLNL SW/SPEIS was distributed for review to anyone and any organization that requested a copy. As shown in Appendix K, many, if not most, of these reviewers are independent of the DOE/NNSA. Additionally, the EPA is statutorily required to review the LLNL SW/SPEIS, and did so. In accordance with DOE NEPA regulations, DOE evaluates every site-wide environmental impact statement at least every 5 years (see 10 CFR §1021.330[d]). The LLNL SW/SPEIS assesses the direct, indirect, and cumulative impacts of all proposed actions, reasonable alternatives, and connected actions.*

*The LLNL SW/SPEIS distinguishes the specific impacts for the use of the proposed materials in NIF and the site-wide impacts of the proposed actions listed in Chapter 3. The specific impacts of using the proposed materials on NIF are identified in Appendix M. The site-wide impacts for the Proposed Action, including NIF’s use of the proposed materials, are identified for each of the resource areas in Chapter 5.*

*The decision as to which NNSA will take, will be announced through the issuance of a ROD. The ROD will state what decisions have been made and identify all alternatives considered by the agency in reaching these decisions, specifying the alternatives which were considered to be environmentally preferable. Additionally, the ROD may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions. The ROD will also identify and discuss all such factors including any essential considerations of national policy, which*

were considered by the agency in making these decisions and state how those considerations entered into its decisions.

- 31.04** Several commentors stated that the Draft LLNL SW/SPEIS is inadequate. Many of these commentors suggested that DOE revise and recirculate the LLNL SW/SPEIS as a draft.

**Response:** *Through the Final SW/SPEIS, NNSA is responding to public comments on the draft. As a result of these responses, changes have been made and are reflected in the Final SW/SPEIS. However, NNSA has identified no reason to recirculate another draft of the LLNL SW/SPEIS. The Draft LLNL SW/SPEIS was adequate and complies with all aspects of NEPA.*

- 31.05** Commentor contended that DOE is attempting to tier impact statements in a manner that is inconsistent with NEPA. The LLNL SW/SPEIS should analyze program level impacts, rather than site-wide impacts. Commentor stated that the SSM PEIS is outdated and cannot be given legal significance as a tiering document to contemporary impact studies. A commentor suggested that DOE provide a genuine assessment of the long-term cumulative and synergistic effects of these projects. Additionally, a commentor questioned Site 300 construction activities.

**Response:** *The LLNL SW/SPEIS assesses the direct, indirect, and cumulative impacts of all proposed actions, reasonable alternatives, and connected actions. These impacts occur at LLNL and within the region of influence. The document does not distinguish between “site-wide impacts” and “program level impacts.” As discussed in Comment Response 01.01 and 02.01, the SSM PEIS, which focuses on evaluating alternatives for maintaining the safety and reliability of the U.S. nuclear weapons stockpile without underground testing, remains valid today and provides a framework for the SSP and the LLNL site-specific proposals for the foreseeable future. Additional information regarding Site 300 construction activities is discussed in Comment Response 04.02.*

- 31.06** Some commentors disagreed with or suggested changes to the format and overall content of the LLNL SW/SPEIS. Commentors stated that DOE should include a comprehensive cross-referencing and indexing system. The table of contents for all the appendices should be available in Volume I and Summary. The LLNL SW/SPEIS should also be revised to read in layman’s terms. Another commentor found the language to be imprecise and undefined (e.g., minimal impacts, adverse). Impacts tended to be segmented into discrete categories, rather than considering synergistic effects. References to documents, such as previous EISs and technical appendices, are not readily available. The 2,000-page LLNL SW/SPEIS violates CEQ regulations stating that the Final LLNL SW/SPEIS shall be less than 300 pages. A commentor requested an internal NEPA review document from NNSA through a *Freedom of Information Act* (FOIA) request so that the alternatives can be meaningfully evaluated, and to determine whether the scope of the project and depth of the NEPA review was sufficient to protect the workers and public and environment. Commentor referred to a FOIA request related to TRU waste and its shipment to and from LLNL.

Commentor stated that the document has been written in discrete parts without the benefit of integration. The LLNL SW/SPEIS includes many sections that overlap. The assumptions made in each calculation should be listed. In numerous instances throughout the LLNL SW/SPEIS, data was published in truncated tabular form, but never appears anywhere in the text. Moreover, units should be used that are well known to laypeople and to the scientific community.

Commentor stated there is insufficient information (including D&D) in the Summary and Chapter 3 tables to allow the general public to discern the various impacts. Additionally, the tables should cross-reference to the various sections in the main document.

Commentor requested two documents under the FOIA and cannot adequately comment on the LLNL SW/SPEIS without reviewing these documents.

Commentors stated that the Department of Toxic Substances Control recently updated the Initial Study format and eliminated the Special Initial Study. Therefore, remove all text references in the LLNL SW/SPEIS to the word “special.”

**Response:** *The LLNL SW/SPEIS was written to conform to all legal requirements, including the following CEQ guidance (40 CFR §1502.10): “Agencies shall use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action. The following standard format for environmental impact statements should be followed unless the agency determines that there is a compelling reason to do otherwise: (a) Cover sheet; (b) Summary; (c) Table of contents; (d) Purpose of and need for action; (e) Alternatives including proposed action (sections 102(2)(C)(iii) and 102(2)(E) of the Act); (f) Affected environment; (g) Environmental consequences (especially sections 102(2)(C)(i), (ii), (iv), and (v) of the Act); (h) List of preparers; (i) List of Agencies, Organizations, and persons to whom copies of the statement are sent; (j) Index; and (k) Appendices (if any).” DOE/NNSA understands that the primary subject of the LLNL SW/SPEIS (nuclear weapons research and development activities) is complex, and attempted to write the LLNL SW/SPEIS in plain language using appropriate graphics so that decisionmakers and the public could readily understand them. It should be understood, however, that the more complex the subject, the more difficult a task it is to write in “plain English,” while still maintaining scientific credibility. All unclassified references for the LLNL SW/SPEIS were made available in the reading rooms at LLNL and the Oakland Federal Building. NNSA fulfilled requests for additional access to reading rooms. In addition, copies of specific references were provided to individuals and organizations upon request. The references for LLNL SW/SPEIS include unclassified, classified, and “official use only” documents. In addition to those documents referenced, additional DOE, NNSA and LLNL documents were reviewed; however, they were not included in the references since no information from them was used in preparation of the LLNL SW/SPEIS. NNSA responds to FOIA requests separately from the NEPA process.*

*With respect to the length of the document, the CEQ guidance (40 CFR §1502.7) states that final EISs shall normally be less than 300 pages for proposals that are of unusual*

scope and complexity. The CEQ guidance regarding the length of an EIS only addresses the following sections of an EIS: (1) Purpose of and need for action; (2) Alternatives including proposed action (sections 102(2)(C)(iii) and 102(2)(E) of the Act); (3) Affected environment; and (4) Environmental consequences. This corresponds to Chapters 1 through 5 of the LLNL SW/SPEIS, which total approximately 600 pages. Given the complexity of the LLNL operations and that this document is a site-wide EIS as well as a supplemental PEIS, DOE believes that the LLNL SW/SPEIS is a reasonable length for the amount of material that DOE was required to cover. Additionally, the Summary of the LLNL SW/SPEIS is written to provide a concise document addressing the major impacts and major decisions to be made by NNSA.

Details regarding assumptions for a given calculation are generally found in the associated appendix for that resource or in a listed reference. Scientific units used in the LLNL SW/SPEIS are well known to the general public and to the scientific community.

- 31.07** Commentor stated that the LLNL SW/SPEIS should discuss EPA's multi-media inspection at LLNL, and address how EPA's findings and recommendations would be incorporated in the fully evaluated alternatives. In particular, the LLNL SW/SPEIS should evaluate how LLNL would address compliance with SPCC Plan regulations. If available, the findings and recommendations of other environmental compliance inspections at the Livermore Site and Site 300 since October 2002 should be reflected in the LLNL SW/SPEIS.

**Response:** *A discussion of the inspection is not required to identify the differences among the Proposed Action and the alternatives. DOE is committed to performing all operations in accordance with all applicable laws and regulations. According to recent amendments to 40 CFR §112.3, the SPCC Plan must be amended no later than February 16, 2006 and implemented by August 16, 2006. LLNL is in the process of reviewing and addressing all the comments and concerns raised as part of the multi-media inspection. This includes complying with requirements and updating the Livermore Site and Site 300 SPCC Plan. The current updates were originally promulgated in 2002 and amended in 2004. The implementation of the SPCC is applicable to all of the alternatives and would be implemented regardless of which alternatives are selected in the ROD.*

- 31.08** Commentor recommended having a representative from DOE headquarters at the public meetings. Commentors believed that it is inappropriate to have a DOE employee in charge of collecting public comments.

**Response:** *The comments are noted.*

- 31.09** Commentor questioned the categorical exclusion of the central cafeteria replacement. This cafeteria would be located near the drainage retention basin and could possibly impact populations of the California red-legged frog. The cafeteria also should be tested for trichloroethylene vapor intrusion. Commentor questioned the categorical exclusion of the International Security Research Facility. Construction of this facility could impact the environment. Commentor questioned the categorical exclusion of the Tritium Facility

Modernization Project. DOE should perform a NEPA evaluation of this facility and discuss the relationship between the activities between this facility and the Proposed Action. The LLNL SW/SPEIS should also explain the total budget and schedule for all activities associated with this project.

Other LLNL initiatives have been issued a FONSI: Terascale Simulation Facility, BSL-3 Facility, and security upgrades. These facilities should not be excluded from further NEPA review and all FONSIs should be reviewed in the LLNL SW/SPEIS.

**Response:** *According to DOE NEPA regulations (10 CFR Part 1021), actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment can be categorically excluded from further NEPA action. All continuing operations are evaluated in the LLNL SW/SPEIS as discussed in Chapter 3, Section 3.2. Budget and schedule information is provided in Comment Response 03.02. The cafeteria and the International Security Research Facility are operational. The Terascale Simulation Facility, BSL-3 Facility, and the security upgrades are nearly complete. The Tritium Facility Modernization Project is still in the planning process. Each of these projects was analyzed under an environmental evaluation or addressed through a categorical exclusion and analyzed as part of the No Action Alternative.*

**31.10** Commentor suggested that DOE/NNSA incorporate aspects of the “precautionary principle” into the LLNL SW/SPEIS and use it as a decision-making tool.

**Response:** *DOE/NNSA complied with all applicable laws, regulations, and guidance regarding the preparation of the LLNL SW/SPEIS. NNSA considers the No Action Alternative to be consistent with the precautionary principle because it represents a level of operation consistent with past operations at LLNL.*

## **32 OUTSIDE THE SCOPE OF THE LLNL SW/SPEIS**

**32.01** Commentor expressed concern regarding the energy crisis in California and suggested that residents take actions to reduce energy consumption. Commentor stated that the LLNL SW/SPEIS should be compliant with the *California Environmental Quality Act* (CEQA).

**Response:** *DOE has a formal energy conservation program at LLNL. CEQA does not apply since this LLNL SW/SPEIS does not invoke a decision by a state agency. The Notice of Intent was distributed to Federal, state, and local government agencies, and tribes requesting comments on the alternatives and offering the opportunity to be a cooperating agency. No requests to be a cooperating agency were received, however, the California Department of Toxic Substances Control requested that Appendix B be formatted in a manner that would be beneficial in their consideration of future permit requests from LLNL.*

**32.02** Commentor stated that DOE should analyze the potential use of nuclear weapons. Commentor suggested that DOE eliminate all nuclear arms. Commentor submitted a

petition dated July 17, 1945, to the President of the U.S. opposing the use of atomic bombs in war with Japan. Commentor is opposed to war.

**Response:** *The policy for the use or elimination of nuclear weapons is beyond the scope of this LLNL SW/SPEIS. NNSA programs and operations comply with the United States nuclear weapons policy developed by the President and legislated by Congress.*

- 32.03** Commentor stated that all government employees should consider how they are being used to support an imperial power that is oppressing the world. Commentor is opposed to launching armed satellites into space. The *Preservation of Space Act* (H.R. 3657) prohibits putting weapons into space and provides international treaties to ban space weapons. Commentor questioned the financial benefits LLNL receives through management by the University of California. Commentors suggested DOE provide a master plan and timeline for the transfer of activities from Lawrence Berkeley National Laboratory (LBNL) to LLNL. Commentor was concerned about the groundwater at Lawrence Berkeley National Laboratory and the Lawrence Hall of Science. Another commentor questioned why the University of California is exempt from paying state taxes.

**Response:** *These comments are beyond the scope of the LLNL SW/SPEIS.*

- 32.04** Commentors expressed disagreement with nuclear weapon policies and NNSA operations at LLNL based on religious and personal convictions.

**Response:** *These comments are beyond the scope of the LLNL SW/SPEIS. For additional information on nuclear weapon policies, see Comment Response 02.01.*

- 32.05** Commentors expressed a lack of confidence in the management at LLNL.

**Response:** *LLNL is managed in accordance with all applicable Federal, state, and local laws.*

### **33 PLUTONIUM LIMITS**

- 33.01** Commentors expressed opposition to increasing the administrative limit for plutonium at LLNL. The administrative limit should decrease, not increase; or plutonium should be completely deinventoried at LLNL. Commentors stated that increasing the administrative limit is dangerous and alarming, a threat to the health and safety of the local population, and encourages nuclear proliferation. Plutonium cannot be stored safely at LLNL.

Commentor questioned how the limit for plutonium can be increased when there is no disposition pathway material and waste. Commentor requested a description of initiatives to dispose of plutonium, including the potential risks for the initiatives. Please indicate the forms in which the plutonium will be stored, types of storage containers, and duration of storage. Would plutonium administrative limits be reduced back to current levels

when appropriate disposal has been identified and implemented? Would it be possible for plutonium to be stored at the Savannah River Site?

Commentor requested that DOE cite the specific changes in the purpose and need for the SSP that were not anticipated in the 1999 or 1997 Supplement Analysis and the amount of plutonium that would be required for each. Cite specific alternatives for each of the changes.

Commentor questioned the increase in plutonium in relation to the history of criticality violations and releases of plutonium. Another commentor requested an analysis be completed for storage of plutonium for the next 50 to 75 years.

Commentors expressed concern about an increase in plutonium MAR from 20 kilograms to 60 kilograms. Commentors stated that it is unsafe, an environmental threat to the people of California, a risk to health, would increase air pollution, increase exposure, and would increase generation of TRU waste. Commentors believed that the plutonium MAR decreased. A commentor also stated that the hazards are inadequately examined in the LLNL SW/SPEIS. Commentors suggested that the accident analysis be redone. Commentors believe that there is no justification for increasing radiation risks by increasing MAR limits.

**Response:** *NNSA continues to rely on LLNL to meet its SSP mission objectives. These objectives include campaigns relating to pit manufacturing and certification, advanced radiography, dynamic materials testing, materials shelf-life experiments, and enhanced surveillance research, which contribute to the need for long-term storage of plutonium. These NNSA-assigned campaigns and programs require increasing the use of plutonium. NNSA continues to work on a solution for disposal of plutonium, but no pathway for LLNL to dispose of excess plutonium currently exists, requiring an increase in the plutonium administrative limits. It would be speculative to consider if plutonium administrative limits could be reduced in the future. The Proposed Action as defined in Chapter 3 for the LLNL SW/SPEIS includes proposals that were not previously considered in the SSM PEIS or other NEPA documents.*

*NNSA has reconsidered its requirements and determined that there is no reasonably foreseeable need to pursue either the AMP or ITP. Therefore, the AMP has been removed from the No Action Alternative and ITP has been removed from the Proposed Action. Changes have been made in Chapter 1, Sections 1.5.2, 1.5.3, and 1.5.4 and Chapter 3, Sections 3.3.2, 3.3.3, and 3.3.4 in the Proposed Action. These revisions include changing the proposed increase in the administrative limit for plutonium to 1,400 kilograms (compared to 1,500 kilograms in the Draft LLNL SW/SPEIS) and changing the proposed increase in the MAR limit to 40 kilograms (compared to 60 kilograms in the Draft LLNL SW/SPEIS).*

*Chapter 5, Sections 5.2.14.2, 5.3.14.2, and 5.4.14.2, discuss radiological health impacts for the alternatives. There would be no significant impact to the public or the environment from storing 1,400 kilograms of plutonium. As stated in Chapter 1, Section*

*1.5.2, the Superblock plutonium inventory is stored in robust vaults and no accident scenario involving the material in the vaults is considered reasonably foreseeable. Plutonium would be stored as metal and oxide, and as various isotopes and compounds. It will be stored in various types of containers. These containers and the vault would permit indefinite storage of the material.*

*In the case of a MAR increase from 20 kilograms to 40 kilograms, the LLNL SW/SPEIS evaluates potential impacts to workers and the public from normal operations and accidents. Consequences from an accident were analyzed and are presented in Appendix D, Section D.2.4.9. These consequences are small for an accident expected to occur less than once in a million years.*

*The probability and consequences of a criticality accident is discussed in Appendix D, Section D.2.4.1. This probability was developed based on historical data for criticality accidents.*

*Terrorist acts and Superblock security are discussed in Comment Response 30.01. The information on these acts is provided in classified or official use only documents.*

*Savannah River Site operations, including storage of material from LLNL, are outside the scope of this document.*

*LLNL has a maintenance and storage program that continually inventories and assures the safe storage of plutonium. Excess plutonium has been packaged for long-term storage according to DNFSB Recommendation 94-1.*

*The nuclear nonproliferation issue is addressed in Comment Response 01.01. Information on the purpose and need for SSP operations is covered in Comment Response 02.01.*

## **34 TRITIUM LIMITS**

**34.01** Many commentors expressed concern and opposition regarding the manufacture of tritium targets for the NIF. This would increase the amount of airborne radioactivity emanating from LLNL. There was also concern that the tritium used in the Tritium Facility would increase from the current limit of just over 3 grams to 30 grams. Commentors objected to increasing the tritium MAR because of damage to the environment and an increase in nuclear proliferation. Tritium target fabrication presents many unstudied risks and should be given a more substantial treatment in the LLNL SW/SPEIS.

Commentor expressed concern regarding the increase in administrative limits for tritium. Commentor is concerned that tritium cannot be safely stored at LLNL because of past tritium releases at LLNL. Tritium contamination has harmful biological effects and environments around LLNL have been contaminated. Many commentors believed that the tritium administrative limit should be decreased. The LLNL SW/SPEIS should

catalog historical tritium releases from LLNL, provide local tritium concentrations, and mitigations to protect against future releases. LLNL should consider reducing or deinventorying tritium at LLNL. Commentor asks for a discussion of tritium in LLNL waste, releases to sewage, soil, and groundwater.

**Response:** *As noted in Chapter 1, Section 1.5.5 and Chapter 3, Section 3.3.5, LLNL has been assigned responsibility to support future planned SSP activities such as the high-energy density physics target fill and the Test Readiness Program. These activities require the use of 30 grams of tritium at LLNL. Tritium would be stored in robust containers in accordance with all applicable Federal, state, and local laws and regulations.*

*LLNL has historically released tritium to the air during routine operations and, occasionally, by accident. Chapter 4, Figure 4.10.5–1, lists the history of tritium emissions from the Tritium Facility from 1981 to 2002. Chapter 5, Section 5.6 discusses mitigation measures.*

*Under normal operations, Chapter 5, Section 5.2 notes that it is anticipated that tritium impacts on vegetation and wine might increase slightly as Tritium Facility activities at the Livermore Site would increase. Tritium emissions would increase from approximately 30 curies in 2002 to 210 curies per year for the Proposed Action. In addition, Site 300 and NIF would use tritium under the No Action Alternative. For further discussion of tritium releases, see Comment Responses 16.01 and 17.02.*

*Tritium in surface and drinking waters is discussed in Section 4.11.1, tritium in stormwater in Section 4.11.2, tritium in groundwater in Section 4.11.3.4, tritium contamination at Site 300 in Section 4.11.3.4. Tritium in wastewater is discussed in Section 4.14.4. The impact of tritium is discussed extensively throughout Section 4.17. Tritium levels in vegetation and commodities are also discussed beginning in Section 5.2.7.2 and Section 5.2.8.2. Tritium contamination is discussed in Sections 5.2.9 and 5.2.15. Tritium in waste is discussed in Section 4.15.2.2.*

*Analysis in the LLNL SW/SPEIS shows the increased tritium MAR would result in higher consequences from an aircraft crash into the Tritium Facility. This accident is unlikely (annual occurrence frequency of  $1.53 \times 10^{-6}$ ) and would result in lower consequences (i.e., a lower number of LCFs) and is not the bounding radiological accident under any alternative. The increased likelihood of a LCF for the population surrounding LLNL is  $1.1 \times 10^{-1}$  LCFs and onsite workers is  $1.44 \times 10^{-1}$  LCFs (Appendix D, Table D.2.5–2).*

*The nuclear nonproliferation issue is addressed in Comment Response 01.01. Human health effects from tritium are discussed in Comment Response 23.02.*

## **35 BIOSAFETY LEVEL-3 FACILITY**

**35.01** Commentors opposed collocating an advanced “bio-warfare agent facility” with nuclear weapons activities in a classified area at LLNL. Commentors stated that DOE proposed

genetic modification and aerosolization (spraying) with live anthrax, plague, and other deadly pathogens could weaken the international biological weapons treaty and pose a risk to workers, the public, and the environment in the Bay Area. The LLNL SW/SPEIS does not adequately describe the unique security issues. Also, the LLNL SW/SPEIS fails to give alternative sites and does not provide the purpose and need for the BSL-3 Facility at LLNL.

Commentor questioned if infectious materials, biotoxins, or pharmaceuticals from the BSL-3 Facility would have potential to impact groundwater. Commentor questioned how the biological agents will be transported and disposed of at LLNL.

Commentors questioned how the BSL-3 Facility can be included in the No Action Alternative when there is pending litigation against the use of “dangerous pathogens” and a current judicial order prohibiting their importation pending resolution of the litigation.

Some commentors requested that the “precautionary principle” be applied to BSL-3 Facility operations. Commentors attached detailed comments from 2002 that were submitted in response to the BSL-3 EA.

**Response:** *The BSL-3 Facility would not be used for developing bio-warfare agents. The United States is a signatory to the Biological and Toxin Weapons Convention Treaty, which prohibits bio-weapons development. This BSL-3 Facility would develop DNA signatures to rapidly identify deadly agents that can be used to protect the public in response to a bio-terrorism incident. The BSL-3 Facility operation does not combine biological research with nuclear weapons activities. No radioisotopes would be used in the BSL-3 Facility. Genetic modification activities would be used for studying how to weaken an agent, not to make it more robust.*

*Samples could be shipped to LLNL by commercial package delivery services, the U.S. Postal Service, other authorized entity, or delivered to the receiving area from an origination point within LLNL by a designated LLNL employee acting as a courier (39 CFR Part 111; 42 CFR Part 73; 49 CFR Part 171). Smaller samples could be shipped that would be microliters in size; the maximum possible sample size would be 15 milliliters. All incoming packages (regardless of origination point) containing infectious agents would be packaged in DOT-approved packages (42 CFR Part 73). Transportation and interstate shipment of biomedical materials and import of select agents would be subject to the requirements of the U.S. Public Health Service Foreign Quarantine (42 CFR Part 71), the Public Health Service, and DOT regulations. Additionally, the U.S. Department of Agriculture regulates the importation and interstate shipment of animal or plant pathogens (7 CFR Part 330; 9 CFR Part 121; and 9 CFR Part 122). Biological wastes would be treated and disposed of in accordance with the Centers for Disease Control and National Institutes of Health guidance, and other applicable Federal, state, and local regulations. This facility would be included in the LLNL medical waste treatment permit issued by the State of California and overseen by the Alameda County Department of Public Health.*

*An Environmental Assessment provides NEPA coverage for the construction and operation of this facility. The EA presented purpose and need, alternative sites, and environmental impacts including groundwater. Any comments received in 2002 were addressed in the BSL-3 EA. A FONSI (DOE/EA-1442), dated December 16, 2002, was issued for the BSL-3 Facility at LLNL. The No Action Alternative includes all projects for which there is approved NEPA coverage and that includes the BSL-3 Facility. This facility was the subject of litigation. On September 10, 2004 the United States District Court for the Northern District of California issued an Order stating that DOE's EA (DOE/EA-1442) was not arbitrary or capricious and found the EA to be adequate. Tri-Valley CAREs v. United States Department of Energy, No. C03-3926 (SBA). No further NEPA analysis is required prior to commencing BSL-3 Facility operations.*

*For international biological treaty issues, see Comment Response 01.02.*

*For comments relating to terrorist attacks, see Comment Response 30.01.*

*For information on the precautionary principle, see Comment Response 31.10.*

## **36 LAWRENCE BERKELEY NATIONAL LABORATORY WASTE DRUMS**

**36.01** Commentor expressed concern and opposition regarding LBNL waste drums. Commentor requested more detail concerning shipments, including what roads will be used; how often shipments would occur; would local residents be notified; would shipments occur during peak or off-peak hours; are shipments secured from a terrorist attack; and how will these shipments be protected in transit through densely populated urban areas. No analysis of the environmental or human health risks involved with inspection analysis, loading, transport, unloading, and storage are provided in the LLNL SW/SPEIS. Commentors questioned the content, location, source, and type of radioactivity and hazardous material, and disposal locations of the LBNL waste drums. The LLNL SW/SPEIS should provide necessary permits and associated packaging and shipping requirements. Commentors were concerned about past shipments of waste from LBNL to Hanford.

**Response:** *The Proposed Action has been reduced from 14 drums of low activity TRU and mixed TRU waste to five drums of mixed TRU waste from LBNL to LLNL for characterization and ultimate disposal at WIPP. This change is stated in Chapter 3, Section 3.3.16, and Appendix A, Section A.2.4.14. The LBNL waste drums are currently located at LBNL in Building 85 and would be transported through the Interstate 580 corridor to LLNL for characterization and shipment to WIPP. All liquid corrosive and non corrosive mixed TRU waste would be neutralized and solidified before shipment to LLNL. The total volume of the mixed TRU waste is approximately 77 liters with a total activity (all isotopes) of approximately 120 millicurie. The type of radioactivity and hazardous material in the LBNL waste drums is mixed TRU waste that meets the definition of mixed TRU waste in Appendix B, Section B.1.1. This single shipment would be in accordance with DOT requirements and would be coordinated with the State of California. Appendices B and J provide information concerning permits and regulations.*

*The environmental impacts from this shipment are presented in Appendix J, Section J.6.1. The analysis in Appendix J assumes a radiation dose rate of 4 millirems per hour for all waste shipments including the shipment between LBNL and LLNL. The operations at LBNL, including possible shipments to Hanford, are not within the scope of the LLNL SW/SPEIS. For additional information on routes and security see Comment Responses 20.01 and 30.01.*

### **37 DEVELOPING NEW TECHNOLOGIES FOR PLUTONIUM PIT MANUFACTURING**

**37.01** Many commentors indicated opposition to the proposed plan to test new manufacturing technologies for producing plutonium pits for nuclear weapons and recommended the stoppage of funding to this project. Commentors asked for a more detailed description to allow the public to analyze its hazards and proposed alternatives. The LLNL SW/SPEIS should discuss the relationship between these new technologies proposed at LLNL and the operation of DOE's proposed Modern Pit Facility (MPF). A commentor asked how many prototype pits or hemi-shells are going to be manufactured under this proposed action. An explanation as to why LLNL was chosen for the development of new technologies for manufacturing plutonium pits should be provided in the LLNL SW/SPEIS. Commentors stated that production of bomb cores would have grave safety, risk to the community, proliferation, and environmental consequences such as increasing the amount of airborne radioactivity.

Commentors also requested an analysis of past pit development at the Rocky Flats Plant. Commentors expressed concern about past health effects at the Rocky Flats Plant. Commentors questioned the need for the development for new pit manufacturing techniques because the United States could take older warheads out of the stockpile, thus lowering the average age of the stockpile and obviating the need for new pits. The LLNL SW/SPEIS fails to adequately discuss LANL's current plutonium pit manufacturing capabilities.

Commentors asked for an explanation of the relationship between SSP and technology development for pit manufacturing.

A commentor questioned the need to produce additional pits given the fact that the United States is "awash in pits."

**Response:** *As noted in Chapter 3, Section 3.1, NNSA continues to rely on LLNL to meet its SSP mission objectives. These objectives include campaigns relating to pit manufacturing and certification, advanced radiography, dynamic materials testing, materials shelf life experiments, and enhanced surveillance research.*

*The proposal to increase the plutonium MAR has been revised from 60 kilograms to 40 kilograms, recognizing the removal of ITP from the Proposed Action. A MAR of 40 kilograms is required to support future Stockpile Stewardship Programs such as the casting of plutonium parts in (one or two rooms) in the Plutonium Facility. These activities support campaigns for advanced radiography, pit manufacturing, and*

certification programs. The LLNL SW/SPEIS has been updated for this change including the accident analysis in Appendix D, Section D.2.4.9 and is identified as a bounding accident for nuclear material handling in Chapter 5, Section 5.5.1.2. Additional information has been added to the Summary and Chapter 3 pertaining to plutonium casting in the Plutonium Facility.

LLNL is one of only two plutonium research facilities in the United States. Given the significant amount of work underway at the LLNL Plutonium Facility, NNSA chose LLNL to conduct some of the technology development efforts to support pit manufacturing. Actual production of pits would take place at another site.

Regardless of a decision concerning the MPF, NNSA has identified the need to develop advanced plutonium casting techniques at LLNL. Decisions regarding a MPF and issues concerning the safety and past operations of the Rocky Flats Plant are not within the scope of the LLNL SW/SPEIS. Commentors seeking more information regarding the MPF are directed to the Draft Supplemental Programmatic Environmental Impact Statement on Stockpile Stewardship and Management for a Modern Pit Facility (DOE/EIS-236-S2).

### **38 CONTAINER SECURITY TESTING FACILITY**

**38.01** Commentor questioned the use of a categorical exclusion to satisfy the NEPA requirement for the Container Security Testing Facility. Testing could possibly cause container breach, therefore accidental release of emissions exists. Possible risk to human health and the environment from actual or simulated threat materials should be discussed in the LLNL SW/SPEIS. The Container Security Testing Facility should be described more thoroughly in the LLNL SW/SPEIS.

**Response:** According to DOE NEPA regulations (10 CFR Part 1021), actions that DOE has determined do not individually or cumulatively have a significant effect on the human environment are categorically excluded from further NEPA action. All operations are evaluated in the LLNL SW/SPEIS, as discussed in Chapter 3, Section 3.2. The Container Security Testing Facility is described in detail in Appendix A, Section A.2.3.5, with considerable supporting detail in Appendix A, Section A.2.2.51. Further detail on the hazards associated with the operation of this facility are detailed in reference DOE 2003a.

### **39 PREPARATION FOR TEST READINESS**

**39.01** Many commentors expressed opposition to the proposal to develop diagnostics to “enhance” the Nation’s readiness to conduct full-scale underground nuclear tests. Commentors opposed this over concerns for nuclear proliferation and over the impact on ratifying the Comprehensive Test Ban Treaty. Commentors also opposed Enhanced Test Readiness because they claim it is terrible for the environment, the American geopolitical strategy, and because it is a danger to health and world peace. The LLNL SW/SPEIS does not provide decisionmakers and public with sufficient information to comment on the impacts, alternatives, and potential mitigation measures associated with this project.

A commentor questioned if DOE had public outreach in Nevada and Utah as part of the test readiness program.

**Response:** *In response to a 1993 Presidential directive, NNSA was required to maintain the ability to conduct a full scale underground nuclear test at the NTS within 24-36 months of receiving direction from the President to do so. Recently, Congress has directed NNSA to achieve, by October 1, 2006, a readiness posture of not more than 18 months for the potential resumption of underground nuclear testing of nuclear weapons, if the President directs (and Congress approves) a resumption of such testing. The element of the Enhanced Test Readiness Program assigned to LLNL with potential local environmental impacts includes providing diagnostic systems for nuclear testing, which contain tritium. The proposed higher tritium limits are required in order to fabricate these systems. Though LLNL has been assigned other responsibilities supporting Enhanced Test Readiness, they are planning and engineering functions carried out by the existing LLNL workforce.*

*The nuclear nonproliferation issue is addressed in Comment Response 01.01.*

*The proposed higher tritium limits are addressed in Comment Response 24.01.*

*The issue of recirculating the Draft LLNL SW/SWEIS for public comment is addressed in Comment Response 31.04.*

*DOE did not conduct public outreach in Nevada and Utah in connection with the LLNL SW/SPEIS because the focus of this site-wide EIS is LLNL in California. The site-wide EIS for the NTS, DOE/EIS-0243 (issued November 1996) along with its Supplement Analysis, DOE/EIS-0243-SA01 (2002), were the NEPA documents where public outreach in Nevada and Utah was conducted.*